Basic Information Document

Revised July 2014
### Acronyms

<table>
<thead>
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<th>Description</th>
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<tbody>
<tr>
<td>BHPS</td>
<td>British Household Panel Survey</td>
</tr>
<tr>
<td>EA</td>
<td>Enumeration Area</td>
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<tr>
<td>GoU</td>
<td>Government of Uganda</td>
</tr>
<tr>
<td>GPS</td>
<td>Global Positioning System</td>
</tr>
<tr>
<td>ISCO</td>
<td>International Standard Classification of Occupations</td>
</tr>
<tr>
<td>ISIC</td>
<td>International Standard Industrial Classification</td>
</tr>
<tr>
<td>LC1</td>
<td>Local Council 1</td>
</tr>
<tr>
<td>LSMS-ISA</td>
<td>Living Standards Measurement Study – Integrated Surveys on Agriculture</td>
</tr>
<tr>
<td>NAADS</td>
<td>National Agricultural Advisory Services</td>
</tr>
<tr>
<td>NDP</td>
<td>National Development Plan</td>
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<tr>
<td>NDS</td>
<td>National Development Strategy</td>
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<tr>
<td>NSDS</td>
<td>National Service Delivery Surveys</td>
</tr>
<tr>
<td>PSID</td>
<td>Panel Study of Income Dynamics</td>
</tr>
<tr>
<td>UBOS</td>
<td>Uganda Bureau of Statistics</td>
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<tr>
<td>UDHS</td>
<td>Uganda Demographic and Health Survey</td>
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<tr>
<td>UNHS</td>
<td>Uganda National Household Survey</td>
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<tr>
<td>UNPS</td>
<td>Uganda National Panel Survey</td>
</tr>
<tr>
<td>UMPC</td>
<td>Ultra Mobile Personal Computer</td>
</tr>
<tr>
<td>CAPI</td>
<td>Computer Assisted Personal Interviews</td>
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<tr>
<td>CWEST</td>
<td>Capture With Enhance Survey Technology</td>
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1.0 Overview

Uganda has experienced strong economic growth over the past two decades, and has made great strides towards improving the quality of life and access to services. In order to continue to promote pro-poor economic growth, the Government of Uganda (GoU) developed the National Development Plan (NDP) and a Joint Budget Support strategy as part of the implementation of the National Development Strategy (NDS).

The GoU recognizes the need for adequate data collection to effectively monitor outcomes of the National Development Strategy (NDS). For this purpose, the Uganda Bureau of Statistics (UBOS) is implementing the Uganda National Panel Survey (UNPS) program, with financial and technical support from the Government of Netherlands, and the World Bank Living Standards Measurement Study – Integrated Surveys on Agriculture (LSMS-ISA) project.

The UNPS is a multi-topic panel household survey that commenced in 2009/10. One of the primary uses of the UNPS is to inform policymaking in advance of the Budget, through descriptive reports that are made ready in time for the initial work on sector budget framework papers.

In order to measure socio and economic dynamics, UNPS began collecting data in 2009/10. This was followed by additional rounds of data collection in 2010/11 and 2011/12.

1.1 Survey Objectives

The UNPS aims at producing annual estimates in key policy areas and at providing a platform for experimenting with and assessing of national policies and programs. Explicitly, the objectives of the UNPS include:

1. To provide information required for monitoring the National Development Strategy, of major programs such as National Agricultural Advisory Services (NAADS) and General Budget Support, and also to provide information to the compilation of the National Accounts (e.g. agricultural production);
2. To provide high quality nationally representative information on income dynamics at the household level and provide annual information on service delivery and consumption expenditure estimates to monitor poverty and service outcomes in interim years of other national survey efforts, such as the Uganda National Household Survey (UNHS), Uganda Demographic and Health Survey (UDHS) and National Service Delivery Surveys (NSDS);
3. To provide a framework for low-cost experimentation with different policy interventions to e.g. reduce teacher absenteeism, improve ante- and post-natal care, or assessing the effect of agricultural input subsidies;

4. To provide a framework for policy oriented analysis and capacity building substantiated with the UGDR and support to other research which will feed into the Annual Policy Implementation Review; and

5. To facilitate randomized impact evaluations of interventions whose effects cannot currently be readily assessed through the existing system of national household surveys.

1.2 Survey Design

The UNPS is carried out annually, over a twelve-month period (a “wave”) on a nationally representative sample of households, for the purpose of accommodating the seasonality associated with the composition of and expenditures on consumption. The survey is conducted in two visits in order to better capture agricultural outcomes associated with the two cropping seasons of the country. The UNPS will therefore interview each household twice each year, in visits approximately six months apart.

Starting in 2009/10, the UNPS set out to track and interview 3,123 households that were distributed over 322 enumeration areas (EAs), selected out of the 783 EAs that had been visited by the Uganda National Household Survey (UNHS) in 2005/06. The UNPS EAs covered all 34 EAs visited in Kampala District, and 72 EAs (58 rural and 14 urban) in each of the (i) Central Region with the exception of Kampala District, (ii) Eastern Region, (iii) Western Region, and (iv) Northern Region.

Within each stratum, the UNPS EAs were selected from the UNHS 2005/06 EAs with equal probability, and with implicit stratification by urban/rural and district (in this order), except for the rural portions of the ten districts that were oversampled by the UNHS 2005/06. In these districts, the probabilities were deflated, to bring them back to the levels originally intended. Since IDP (internally displaced people) camps are now mostly unoccupied, the extra EAs in IDP camps are not a part of the UNPS subsample. This allocation strives for reasonably reliable estimates for the rural portion of each region, and for the set of urban areas out of Kampala as a whole, as well as the best possible estimates for Kampala that can be expected from a subsample of the UNHS 2005/06. Therefore, the UNPS strata of representativeness include (i) Kampala City, (ii) Other Urban Areas, (iii) Central Rural, (iv) Eastern Rural, (v) Western Rural, and (vi) Northern Rural.

Prior to the start of the 2009/10 field work, 2 UNPS households were also randomly selected in each EA for the purposes of tracking baseline individuals that moved away from original locations since the UNHS 2005/06.
In the UNPS 2010/11, the concept of Clusters instead of EAs was introduced. A cluster represents a group of households that are within a particular geographical area up to parish level. This was done due to split-off households that fall outside a particular EA but could still be reached and interviewed if they fell within the same parish as the EA.

The initial UNPS sample will be subject to three consecutive waves of data collection after which, parts of the sample will start to be replaced by new households extracted from the updated sample frames developed by the UBOS as part of the 2012 Uganda Population and Housing Census.

In addition, the UNPS will fit within the Long Term Census and Household Survey Program and therefore both the questionnaires and the timing of data collection will be coordinated with the current surveys and census implemented by UBOS. To suit its multiple objectives, the UNPS comprises a set of survey instruments, namely:

- Household Questionnaire,
- Woman Questionnaire,
- Agriculture Questionnaire, (administered to the subset of UNPS households engaged in agricultural activities) including a Livestock component added in 11/12,
- Community Questionnaire, and
- Market Questionnaire (not conducted in 11/12).

2 Survey Questionnaires – Review of Sections

As mentioned earlier, the UNPS had six questionnaires namely: Household Questionnaire; Woman Questionnaire; Agriculture Questionnaire; Fisheries Questionnaire; Community Questionnaire and Market Questionnaire. Each of these questionnaires is divided into a number of sections and the level of observation for each section varies accordingly.

Unlike the 2009/10 survey where all the questionnaires were administered on paper, the UNPS 2010/11 and 2011/12 Household, Agriculture, Community and Woman questionnaires were administered using computer assisted personal interview (CAPI) software - CWEST and SurveyBe applications – which capture the data directly during interviews. The questionnaires were preloaded onto ultra mobile personal computers (UMPCs) and as a result there was no need for field data entry for these modules.

The tables 1-4 below provides an overview of the sections of the Household, Agriculture, Community and Woman questionnaires, associated data files, and key identifiers.
2.1: Explanatory notes by section – Household Questionnaire

For some households, during Visit 1 only the household roster (Section 2) of the Household Questionnaire was collected. In such cases, the rest of the Household Questionnaire was completed six months later during the Visit 2. For a more detailed explanation, see section 4.0.

**Section 1A: Household Identification Particulars**

Information in this section was distributed by the Headquarters staff to the field teams before starting data collection. Names and codes pertaining to the selected Enumeration Areas (EAs) were provided by UBOS to the team leaders prior to fieldwork. An EA generally does not have its own name but is known by the name of the Local Council 1 (LC1) that is associated with it.

**Section 1B: Staff Details and Survey Time**

The Supervisors and interviewers were required to record their particulars in this section. Time taken to conduct interviews was recorded. The data also include the date on which the household questionnaire was administered in full.

In the data, Sections 1A and 1B have been consolidated, and many of the variables are withheld from public dissemination to maintain the confidentiality of respondents. The public dataset includes a few additional variables for user reference, including variable `comm` which indicates the EA Community that the Household belonged to in 2005/06 and variable `wave` which indicates when the household was created. When wave is 0, the household is one of the original households from the 2005/06 Survey. When wave is 1, this indicates the household split off from an original 2005/06 household and was first interviewed as an independent unit in 2010/11. When wave is 2, this split off happened in 2011/12; when wave is 3 it happened in 2012/13.

**Section 2: Household Roster**

The purpose of this section is to:

(i) Identify all persons who are members of the household;

(ii) Provide basic demographic information such as age, sex and marital status of each household member; and

(iii) Identify any changes to household members between the first and second visit

The respondent for this section was mainly the household head. In the absence of the household head the next person who is acting as household head would be interviewed. **It was a requirement that respondents must be a usual member of the household and should be capable of providing all the**
necessary information about other members of the household. Other household members also helped in providing information or details on particular questions concerning them.

In UNPS 2011/12, a household was defined as a group of people who have normally been living and eating their meals together for at least 6 of the 12 months preceding the interview. Therefore, the member of the household is defined on the basis of their usual place of residence.
Section 3: General Information on Household Members

This section captured general information on all members of the household specifically on:

(i) Parents of household members who sometimes do not live in the same dwelling as the household members.

(ii) The salient moves (migration status) made by members of the household.

(iii) Malaria indicators: use and treatment of mosquito nets.

The respondents for questions in the first half of this section (columns (1) – (7)) were all members of the household below 18 years while the questions in the second half applied to all members of the household. To the extent possible each person was asked directly. If someone was not available or too young to answer then the household head, spouse, or another well-informed member of the household would answer these questions.

Section 4: Education

The objective of this section was to measure the level of education or formal schooling of all household members aged 5 years and above, and to collect educational expenditures associated with each. Information was mainly collected on (i) the literacy status of household members – i.e. member of the household who could read and write; (ii) the educational attainment of each respondent and the type of school attended; and (iii) amount spent on education of household member’s during the past 12 months.

Section 5: Health

This section collected information on illness and injuries among household members during the past 30 days, use of health facilities and medical expenses for treating the illnesses or injuries. The respondents for the section were all members of the household, but parents or a knowledgeable adult (preferably female) could answer for young children.

Section 6: Child Nutrition and Health

These questions were asked with a view of obtaining a better picture of the diversity of the child’s diet. Only children aged from 0 to 59 months and living with a mother or caretaker in the sampled households are eligible for the questions. The questions were answered by the mothers /caretakers of the children because they are considered more knowledgeable about the children. Height and weight measurements were obtained for all children aged 6 to 59 months using anthropometric equipment.
Section 8: Labour Force Status

This section starts with a screen to determine which respondents should be asked about employment and which should be asked the questions that address labor force participation, unemployment, and job search. It also determined the reason for absence for those people who had a job or business but were not at work the previous week. All household members aged 5 years and older were classified into three broad groupings i.e. employed, unemployed, and not in the labor force.

**Employed persons** were defined as those who were working at a paid job or business or who were working unpaid at a household business or farm **for at least one hour during the reference week**, or who did not work during the reference week but held a job or had a business from which they were temporarily absent.

**Unemployed persons** were classified as those individuals who did not work at all during the reference week and who were not absent from a job, but who actively looked for work during the past four weeks and were available to work in the reference week. Persons who were on layoff from a job to which they expected to return and were available to work during the reference week are also classified as unemployed, even if they did not actively look for work. The sum of the employed and the unemployed constituted the **labor force**. (**Persons not in the labor force** were those who were neither employed nor unemployed. They did not work, they were not absent from work and they did not actively look for work in the past four weeks).

Section 9: Housing Conditions, Water and sanitation

Data from this section was aimed at measuring the quality of housing occupied by the household currently. Information was collected on the type of dwelling, occupancy status, the physical characteristics of the dwelling, and access to basic services (including water, electricity and sanitation). A dwelling was defined as a building or a group of buildings in which the household lived. It could be a hut, a group of huts, a single house, a group of houses, an apartment, several one-room apartments, etc.

Section 10: Energy Use

Information obtained in this section aimed at measuring the access and utilization of energy fuels, especially for lighting and cooking.
Section 11: Other Household Incomes

This section gathered information on income transfers i.e. all incomes of household members other than that from paid and/or self-employment during the past 12 months.

Section 12: Non-agricultural Enterprises/Activities

This section collected information on the presence of non-agricultural household enterprises. It includes information on income and employment derived from non-agricultural household enterprises and identified which household member was responsible for each enterprise in terms of decision making and the allocation of income generated. It also covered the involvement of household enterprises in the credit market. The respondent for each enterprise was a member of the household best informed about the activities of the enterprise.

An enterprise was defined as any undertaking which is engaged in the production and/or distribution of some goods and/or services meant mainly for the purpose of sale, whether fully or partly.

Section 14: Household Assets

This section aimed at collecting data to estimate the value of household, farm and non-farm enterprise assets. It also collected information on ownership of assets.

Section 15: Household Consumption Expenditure

This section covered expenditures of the household with different reference periods depending on the frequency of purchases. It is separated into four parts which include: (a) food, beverages and tobacco; (b) non-durable goods and frequently purchased services; (c) semi-durable and durable goods and services; and (d) non-consumption expenditure.

The major emphasis of the section was mainly on consumption and not monetary expenditures. Although the two are very close, they are not the same. Household consumption expenditures in cash, kind or through barter were recorded for the household only. For bartered items the value of the item paid for (not the value one got in exchange) was recorded. Food, beverages or tobacco served to other members and guests in the household during the reference period were however included. The respondent for this section was the person (household member) who managed the household budget and was the best informed about the household’s consumption expenditure.
Section 15A, *number of household members present during the past 7 days*, was not administered during this wave. To calculate per person consumption totals, a supplemental set of questions (forthcoming) were asked: number of meals each household member ate at home, number of adult and child guests that took meals in the home, and how many meals they took.

In Section 15C, *non-durables during the past 30 days*, Code 505 (Health and Medical Care, Other) was not asked during the interviews. It will be included and asked again in the next wave.

The item codes for Section 15D, *semi-durables and durables during the past 12 months*, were revised part-way through fieldwork. Similar codes, for example 302 and 3022, can be combined, as they both refer to the same item. In this dataset, an item is missing from a household goods roster when the respondent did not indicate having purchased/consumed/received that item.

**Section 16: Shocks and Coping Strategies**

**Shocks** were defined as events that happen suddenly. Usually they have a marked beginning and end. While they last for a short time, a few days or weeks, usually their effects are felt for a longer time. It was noted that a shock can be household specific or community wide. Examples of shocks include floods, rebel raids, livestock disease, fire, etc. For example, petty theft of household property was not considered as a shock.

**Section 17: Welfare Indicators and Food Security**

The purpose of this section was to collect information on vital needs and living conditions of households during the last 12 months. It provided additional information to assess household welfare. **Food security** was defined as the availability of food and one’s access to it. A household was considered food secure when its occupants did not live in or fear of starvation.

**Section 18: Transport Services**

Information was collected on access to and use of transport services. These included access to road infrastructure. A **road** was defined as an open way for the passage of vehicles, persons or animals. **Trunk roads** are main roads maintained by the central government and they are normally connecting a district to other districts. These can either be tarmac or murram roads and they are normally six (6) metres and above in width. **District/Feeder roads** are major roads joining Trunk roads and are maintained by the district authorities. **Community roads** on the other hand are roads (excluding footpaths) connecting villages and are normally maintained by the communities themselves.
Table 1: Organization of the UNPS 2011/12 Household Questionnaire

<table>
<thead>
<tr>
<th>Section</th>
<th>Level of Observation</th>
<th>Data File</th>
<th>Key Identifiers</th>
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<td>Household Roster</td>
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<td>General Information on Household Members</td>
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<td>Education</td>
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<td>Household Consumption Expenditures – Food, Beverages and Tobacco (Last 7 days)</td>
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<td>Household Consumption Expenditures – Non-Durable Goods and Frequently Purchased Services (Last 30 days)</td>
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</table>
2.2: Explanatory notes by section – Agriculture & Livestock Questionnaire

The purpose of the agricultural module in the household survey was to give a better descriptive picture of Uganda's farm economy, and deeper insight into factors affecting farm incomes. These would include a better understanding of the influence of farmers' resources and marketing opportunities on farm-household income, and some sense of how farmers' situation has changed in the past few years.

The agriculture module was administered in two visits to the selected households. During the first visit, agricultural production data was collected on the first cropping season of 2011 (January – June 2011). The second visit collected agricultural production data on the second cropping season of 2011 (July – December 2011).

The main or first agricultural season normally refers to the growing cycle of temporary crops that are planted and harvested in the first half of the year, occasionally extending up to the end of June. It thus covers the period between January and June. The second agricultural season is generally the period between July and December. It should be noted that seasons are directly related to rains and only indirectly related to the growing cycle of crops. The first rains are generally longer than the second rains. However, it is also noted that some areas in Uganda have only one significant agricultural season.

Section 1A: Household Identification Particulars

Information in this section was distributed by the Headquarters staff to the field teams before starting data collection. Names and codes pertaining to the selected Enumeration Areas (EAs) were provided by UBOS to the team leaders prior to fieldwork. An EA generally does not have its own name but is known by the name of the LC1 that is associated with it.

Section 1B: Staff details and survey time

The Supervisors and interviewers were all required to record their particulars in this section. Time taken to conduct interviews was also recorded.

Section 2: Current land Holdings and land that the household has access through use rights

The purpose of this section was to have a complete list of all the parcels owned and/or operated as well as rented by the household during the first season of 2011 and the second season of 2011. This section captures information in two parts; Section 2 part A captures information concerning current land holdings and section 2 part B captures information pertaining to land that a household has access to through use rights. The questions were administered to households who had been involved in crop farming during the last completed and the current cropping seasons. Information was collected on agricultural land that
these households had access during the reference period. Issues of land tenure status and land user rights were also investigated. All of Section 2 is administered together, during Visit 1.

**Section 3A & 3B: Agricultural and labour inputs**

This section collected information on non-labor and labor input applications at the parcel-plot-level during the first cropping season (January-June 2011) and second cropping season (July –December 2011) in part A and B, respectively.

**Section 4A & 4B: Crops grown and type of seeds used**

The purpose of this section was to collect information on crop cover of parcels farmed by the household. Data was collected on crops planted by the household during the first cropping season (January-June 2011) and second cropping season (July –December 2011) on each plot on each parcel accessed by the household through ownership or user rights, in part A and B, respectively.

**Section 5A & 5B: Quantification of Agricultural Production**

Information on agricultural production is collected at the parcel-plot-crop-level separately for the first cropping season (January-June 2011) and second cropping season (July –December 2011) in part A and B, respectively. This section also collects data on how the household used the harvested produce.

**Sections 6A, 6B & 6C: Livestock ownership**

The data on the ownership of (i) cattle and pack animals, (ii) small animals, and (iii) poultry and other animals are solicited in sections 6A, 6B, and 6C, respectively. Each section collects information on dynamics of household livestock ownership at animal-type level over a given reference period, earnings from animal sales, and expenditures on animal purchases. If the household cared for animals that belonged to others, interviewers were instructed to record only ownership, sales and purchases of animals the household was entitled to keep, for instance the baby goats or sheep that the household keeps in return for caring the flock.

**Section 7: Livestock Inputs**

The purpose of this section was to estimate expenditure on inputs on livestock i.e. the expenditures necessary to raise the animals. This ranges from breeding, feeding, watering housing, and animal health expenses incurred to raise the animals.
Section 8: Livestock Products

This section collected information on the production and sales of livestock by-products. The reference period was generally last 12 months for live stocks and three months for poultry (eggs). These are covered in different sections (8A-8E) including production of (Meat, Milk, Eggs, Dung and Animal power) respectively.

Section 9: Extension Services

The section collected information on agricultural technology and extension services. It covered access to extension services and access to and demand for agricultural technology. Extension workers were defined as individuals employed by the government or non-governmental organizations who work as agricultural development agents for contacting and demonstrating improved farming methods to farmers. They are responsible for organizing, disseminating, guiding and introducing technical methods in agricultural production directly to farmers, and for facilitating farmers coming into contact with cultivation methods to promote agricultural production.

Section 10: Farm Implements and Machinery

This section collected information on agricultural implements and machinery. It collects information in regard to ownership and estimated value both in cash and in kind of the implements and it has a reference period of 12 months.
**Table 2 : Organization of the UNPS 2011/12 Agriculture & Livestock Questionnaire**

<table>
<thead>
<tr>
<th>Section</th>
<th>Level of Observation</th>
<th>Data File</th>
<th>Key Identifiers</th>
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</thead>
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<td>HHID parcel ID</td>
</tr>
<tr>
<td>Land That the Household Has Access Through</td>
<td>Parcel</td>
<td>AGSEC2B.dta</td>
<td>HHID parcel ID</td>
</tr>
<tr>
<td>Use Rights - 1st/2nd Visit</td>
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<td></td>
</tr>
<tr>
<td>Agriculture and Labour Inputs – 1st Visit</td>
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</tr>
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<tr>
<td>Crops Grown and Types of Seeds Used – 1st Visit</td>
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<tr>
<td>Quantification of Production – 1st Visit</td>
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<tr>
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<tr>
<td>Crops Grown and Types of Seed Used – 2nd Visit</td>
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2.4: Explanatory notes by section – Community Questionnaire

The community survey aimed at collecting information relating to communities residing in the sampled EAs. The administrative unit for collection of community data was mainly the LC1, although there were specific questions for the Sub-county Chief. The community survey information was collected by interviewing key informants within the institutions of interest. These included community members and heads of selected facilities.

Section 1: Community Identification Particulars
Most of the information in this section was obtained from headquarters by field teams before starting data collection. A provision was made to record details for each of the subsequent 4 sectors on which data was collected. These included names of respondents and responses status for each sector.

Section 2: Availability of services within the community
The purpose of this section was to obtain general information on the social infrastructure nearest to the community. Information was collected from community leaders. The social facilities on which data was collected included schools/other education facilities, banks, markets, agricultural and fisheries services, police and army facilities, various types of health facilities, water and sanitation facilities as well as works and transport services.

Section 3: Education (Primary)
Information for this section was provided by a knowledgeable school official preferably the headmaster or someone nominated by him/her. Data was collected on both the most popular and the nearest primary schools. These schools on which data was collected were not necessarily located within the LC1 covered.

Section 4: Health services
In this section, information was collected on the most commonly used public and private health facilities. The respondent for this section was an authorized or knowledgeable health official at the facility preferably the head of the facility. The health facility targeted would be a place that had qualified doctors/nurses/medical attendants for treating patients including dressing and emergency attention facilities and would in addition be selling medicines to patients. Individual doctors, practitioners, etc, doing only consultation, with very limited supply of medicines were excluded. However, Doctors with moderate treatment and medical attention facilities were included.

Section 5: Works and Transport
The respondent for this section was the sub-country chief. Information was mainly collected on the availability, use and maintenance of works and transport infrastructure.
Section 6: Community Characteristics, Groups, needs and resources

The respondent to this section is a group of community members. Information is collected on the number of households in the community and the how the land is used. Information is also collected on the different community groups, NGOS working within the community, the community needs, actions and achievements as well as communal resource management.
<table>
<thead>
<tr>
<th>Section</th>
<th>Level of Observation</th>
<th>Data File</th>
<th>Key Identifiers</th>
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<tr>
<td>Water and Sanitation</td>
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<td>c1aq4</td>
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<td>Types of toilets in Community</td>
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<td>Common stock-out reported by Health Facility</td>
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2.5: Explanatory notes by section – Woman Questionnaire

The intention of the Woman module in the household survey was to gather information relating to knowledge and use of contraceptives among women as well as their birth history. This questionnaire was administered to all women aged 15-49 years in the households.

Section 1a: Household identification particulars

Using CAPI, the Woman Questionnaire is administered as a subset of the Household Questionnaire. As such, this section no longer exists on its own. Relevant variables needed to identify women in a household that are eligible to participate were essentially pre-loaded into the Woman Questionnaire via CAPI from the Household Questionnaire's Household roster.

Section 2A: Contraception

Information on contraceptives was collected by asking respondents about their knowledge and use of various methods that exist for avoiding or delaying pregnancy. The interviewers would ask the respondent about their knowledge of each method. They would go further to ask the respondent if they have ever used each of the methods and which ones (if any) that they are currently using with their partner.

Section 2B: Birth History

The purpose of this section was to obtain information on the birth history of respondents. Information was mainly collected on the number of children ever born, whether dead or alive, as well as birth information on last child born in the last five years (whether living or dead).

Table 4: Organization of the UNPS 2011/12 Woman's Questionnaire

<table>
<thead>
<tr>
<th>Section</th>
<th>Level of Observation</th>
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<th>Key Identifiers</th>
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<td>PID w2bq9a</td>
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</table>
3 Other related instructions/codes

3.1: Area Measurement using Global Positioning System (GPS)

The GPS was mainly used in measuring parcels owned and/or operated by the selected households located within the EA and crop plot area for the respective cropping season of 2011. The GARMIN 12 hand-held Global Positioning System (GPS) equipment was used. The GPS equipment is in principle a high precision digital watch combined with a signal receiver. The field supervisors were responsible for ensuring availability of fully charged batteries for the GPS equipment and also ensuring that they were handled with great care and stored in a safe place when not in use. Details on GPS equipment were well documented and rigorous training about use of GPS was given to the interviewers before actual data collection. With CAPI, GPS measurements could be recorded in one of two ways. Ideally, GPS devises were directly connected to the UMPCs via a Bluetooth connection, thus allowing the GPS coordinates to be automatically stored. In cases where the Bluetooth connection was not working, enumerators were responsible for reading the GPS coordinates on the GPS devise and manually entering those coordinates into the CAPI-based interview program.

3.2: Other Codes

There were a number of sections for which the respective codes could not fit within the cell/page where the question was located. For these questions, a separate code sheet was provided in the instructions manual. These code lists included:

- Reason for staying in the household for less than 12 months
- Highest level of education attained
- Current schooling status
- Ethnicity
- International Standard Classification of Occupations (ISCO)
- International Standard Industrial Classification (ISIC)
- Units of Quantity
- Crop Codes
- Condition and state of crops harvested
4  **Field Work Organization**

Prior to starting fieldwork enumerators and supervisors were re-trained for a period of approximately four weeks with many practical sessions to introduce the concept of CAPI (Computer Assisted Personal Interviews) using the CWEST and SurveyBe software on a newly introduced gadget known as the UMPC (ultra mobile personal computer). The supervisors and enumerators were trained in separate sessions so as to understand the role of each as well as to familiarize themselves with the new mode of data collection. The structure of the implementation of the UNPS 2011/12 wave consisted of 9 mobile field teams, each of which was comprised of a driver, a supervisor, and three enumerators. Each mobile team required a vehicle, UMPCs and GPS units for the enumerators, and anthropometric equipment (height and weight scales). All interview data was collected directly on the UMPCs using CWEST and SurveyBe. Given internet access, the supervisors sent the data electronically from the field at the conclusion of data entry for each EA and compilation of data collected from each cluster within the CWEST application.

The teams went on a two to three week-long trip each month. At the end of each trip, the teams reported back to Headquarters. The main field work, which lasted from November 2011 to October 2012, was comprised of two six-month phases. All households were visited once in each phase with a portion of split-off individuals identified in phase 1 being visited only once across the 12-month period with the visit taking place in phase 2. The latter was mostly due to long-distance tracking cases where the survey teams simply did not have adequate time to track the households as part of phase 1 operations.

The two-visit field work structure was designed to accommodate the difficulties associated with solicitation of information on agriculture in the presence of multiple agricultural seasons. As is well-known, Uganda has two agricultural seasons, the first running from February to July/August and the second from August/September to December. To collect accurate information for each of the two agricultural seasons and minimize recall associated with agricultural decisions that the survey seeks information on, the survey households with the exception of a portion of split-off cases noted above, were visited twice in the course of 12 months.

The dual visits also enabled splitting the questionnaire material and worked towards reducing respondent fatigue. In each cluster, approximately half of the households were randomly selected for the entire household questionnaire to be administered in visit 1. As far as the household questionnaire is concerned, these households only received a roster update in visit 2. The rest of the sample received only the household roster in visit 1 (along with the half of the agriculture questionnaire, assuming that they were agricultural households), and the rest of the household questionnaire along with the household
roster update in visit 2. This arrangement attempted to ensure an even distribution of households that reported information on household consumption in each month of the main field work. The information solicited from each household in visit 1 was fed forward for visit 2.

In the UNPS 2011/12 a concept of waves, phases, visits, clusters and dynasties was adopted. Each of the 9 teams was assigned a cluster containing the households to be interviewed with in a particular visit. This cluster assignment was based on when the households contained in that cluster were interviewed in the previous wave, after which households were re-visited after six months.

4.0: Tracking

Tracking considers the mobility of the target population, the success with which those who move are found and interviewed, and the number of refusals. In the Uganda National Panel Survey 2011/12 tracking was done both at household- and individual-level. It aimed at locating all the 3123 original panel households and among these approximately 20% (2 households from each EA) was considered for individual tracking also known as split-offs tracking. It also included tracking of split offs that had been identified in the previous waves as well as the individuals that further moved away from the split off households.

4.1: Tracking of Households

The UNPS "tracked" all original households by attempting to locate the household members at their last known location including those that shifted from their original location in 2005/06 to another location either within the same EA or outside it. These latter cases are referred to as shifted households. An original household is the household interviewed in the 2005/06 baseline sample. As noted above, from the UNHS 2005/06, a total of 3,123 households were sampled as UNPS households.

Once the location of the original household was found, then the household would be interviewed. Failure to interview a household could be due to shifting to an unknown location, refusal or disintegration among others. Disintegrating means that each of the original household members had gone separate ways and none of them remained at the original location. If a household disintegrated, its members would only be tracked if it fell under the 20 percent sample for split-offs tracking otherwise none of the members of a disintegrated household would be tracked. If the tracked original household had new members as of the 2011/12 interview, the data on these individuals were solicited as well.
4.2: Tracking of Split-offs

As part of the management of individual/split-off tracking the UNPS chose to track a 20% sample households found in each of the 322 Enumeration Areas. The intention is to calibrate the size and composition of the sample of traceable split-offs (currently referred to as tracking targets) that will be actually tracked, so that it roughly compensates the losses due to attrition.

In the UNPS 2009/10, a random sub-sample of two households from each EA was drawn from the already sampled panel households. These two households were referred to as split-offs tracking targets. It was then identified if any of the household members in 2005/06 of these two households had left the household. These movers were referred to as split offs (tracking targets).

Once a split-off was identified, then it was tracked fully by first gathering all the contact information about this split-off/mover as well information on their new location from the original household members and any other knowledgeable person. This information was filled in a questionnaire called the individual tracking form. Based on the details filled in this questionnaire, the mover was contacted if contacts were available, traced based on the location details given by the original household or the contacted mover and then interviewed. The interviewed split-offs as well as the members of the new household that they had formed or had joined in by the time of the UNPS 2009/10 interview then became part of the UNPS sample and will be interviewed in every wave of the UNPS, even if they shift to alternative locations in subsequent waves.

The same procedure was followed in UNPS 2011/12 and individuals that further moved away from the tracked split-off households (from the 20% sample) were also tracked and interviewed and their households also joined the UNPS sample.

It should be noted that only individuals that were related to the household head such as spouse, biological children, parents of the head or spouse, etc (codes 1-7 of Section 2 Question 4 in the household questionnaire) were tracked. Servants, other relatives and non-relatives (codes 8-96 ) were not tracked.

For a split-off household that was tracked in 2009/10, the first 10 digits of the household identifier (HHID) attached to the new household in which the split-off was located in 2009/10 was the same as the household identifier for the household that the split-off was a part of in 2005/06 (i.e. parent household).
The last 2 digits of the 2009/10 split-off household identifier correspond to the 2005/06 roster line number for the split-off individual. In the event that multiple split-offs from the same parent household were found to be co-residing in 2009/10, the last 2-digits of the 2009/10 split-off household identifier correspond to the lowest UNHS 2005/06 roster line number among the split-offs.

For a split-off that moved and was tracked in 2011/12, the first digit of the household identifier (HHID) attached to the new household of the split-off represents the wave in which the split-off was identified as mover. The next digits represent the Person ID of the split-off in the household where he or she was previously dwelling. The parent household in 2005/06 can still be identified from the split-off’s household ID by taking the next 10 digits after the first digit which represents the wave.

5 Linking UNHS 2005/06 & UNPS 2009/10 & UNPS 2010/11 & 2011/12

As part of the dissemination package, the data from the UNHS 2005/06 sample covering 3,123 households and 322 EAs that were selected for the purposes of the UNPS 2009/10 are provided. Furthermore the data for UNPS 2009/10 is also provided.

The UNHS 2005/06 portion of the dissemination package includes the (i) Household, (ii) Agriculture, and (iii) Community data as well as the descriptive reports, questionnaires, and manuals. At the household-level the variable tracking sample as part of GSEC1.dta of the UNHS 2005/06 package identifies the 643 (out of 3,123) UNHS 2005/06 households were selected for split-off tracking prior to the start of the UNPS 2009/10 field work. The UNHS 2005/06 data that are provided could be linked with the UNPS 2009/10 data at the household-, individual- and community-levels through the unique household identifier (HHID), the unique individual identifier (PID), and the unique community identifier (comm), respectively.

Given the attrition at the household- and individual-level, and the addition of new households and individuals to the UNPS sample in accordance with the protocols described above, the household- and individual-level matches across the UNHS 2005/06 subsample and the UNPS 2009/10 and UNPS 2011/12 will not be perfect. The variable wave in GSEC1.dta indicates when a household “joined” the UNPS study: When wave is 0, the household is one of the original households interviewed in 2005/06. When wave is 1, 2, or 3, the household was formed in that wave by members moving or splitting off of from a household that existed in the previous wave.
6 References


### Annex 1. Codes for Unit of Quantity

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## Annex 2: Crop Codes

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Annex 3: Confidential Information, Geospatial Variables

The Uganda National Panel Survey (UNPS) collects confidential information on respondents. The confidential variables include (i) names of the respondents to the household and community questionnaires, (ii) village names, (iii) descriptions of household dwelling and agricultural parcel locations, (iv) phone numbers of household members and their reference contacts, (v) GPS-based household and agricultural parcel locations, (vi) names of field staff. To maintain the confidentiality of our respondents, certain parts of the UNPS database have not been made publicly available.

To enhance the use of UNPS data, a set of geospatial variables has been generated using the georeferenced plot and household locations in conjunction with various geospatial databases that were available to the survey team. These include simple measures of distance, climatology, soil and terrain and other environmental factors. The variables are intended to provide some understanding of how geophysical characteristics vary across households and between communities.

All geospatial variables have been produced using the unmodified GPS data. Most of the underlying datasets are static (with exception of time-series), so the values should be largely unchanged relative to year 1, for non-mover households. Note that there may be some variation due to GPS data entry error, differences in data collection procedure, and technical limitations of the device. Geospatial variables are provided in the file UGA_HouseholdGeovariables_Y1.

UGA_HouseholdGeovariables_Y3

The household-level file, UGA_HouseholdGeovariables_Y2, contains a range of variables measuring (on the basis of the household dwelling) distance to other features, climatology, landscape typology, soil and terrain, and growing season parameters. The observations are uniquely identified by HHID.

This file also contains modified GPS coordinates, which enable users to generate their own spatial variables while preserving the confidentiality of sample household and communities. Following the method developed for the Measure DHS program, the coordinate modification strategy relies on random offset of cluster center-point coordinates (or average of household GPS locations by EA in the UNPS-Panel) within a specified range determined by an urban/rural classification. For urban areas a range of 0-2 km is used. In rural areas, where communities are more dispersed and risk of disclosure may be higher, a range of 0-5 km offset is used. An additional 0-10 km offset for 1% of rural clusters effectively increases the known range for all rural points to 10 km while introducing only a small amount of noise. Offset points are constrained at the state level, so that they still fall within the correct state for spatial joins, although boundary precision may be an issue for clusters located very close to the border.

In this wave of panel data collection some households are tracked to a new location. These include both local and long-distance moves, although a majority of tracked households are within 5 km of the original location. The public coordinates for new locations that are within 5 km of the original household location remain unchanged (modified coordinates of original sample EA). The public coordinates of tracked households that are more than 5 km from original location are assigned a new offset location, according to the method described above. Additionally, the distance from original location is provided for tracked households with new locations.

The result is a set of coordinates, representative at the cluster level, that fall within known limits of accuracy. Users should take into account the offset range when considering different types of spatial analysis. 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. Zonal statistics (average or range of values within an area corresponding to the known range) could help minimize the effect of offsets when combining with large scale data or high resolution grids with a high degree of local variation.

31
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<td>AICD &amp; RAFU</td>
<td></td>
<td>Household Distance to Main Road</td>
<td>dist_road</td>
<td>Continuous</td>
<td>N/A</td>
<td>N/A</td>
<td>Household distance to nearest international or national trunk road (functional class A, B)</td>
<td><a href="http://www.citypop.de/">http://www.citypop.de/</a></td>
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<tr>
<td>CityPop and UBOS</td>
<td></td>
<td>Household Distance to Towns</td>
<td>dist_popcenter</td>
<td>Continuous</td>
<td>2011</td>
<td>N/A</td>
<td>Household distance to nearest town of &gt;20,000 based on 2011 projections from UBOS</td>
<td><a href="http://www.fews.net/Pages/marketcenter.aspx?loc=3&amp;gb=ug&amp;l=en">http://www.fews.net/Pages/marketcenter.aspx?loc=3&amp;gb=ug&amp;l=en</a></td>
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<tr>
<td>USAID FEWSNET</td>
<td></td>
<td>Household Distance to Key Market Centers</td>
<td>dist_market</td>
<td>Continuous</td>
<td>N/A</td>
<td>N/A</td>
<td>Household distance to nearest major market (FEWSNET key market centers)</td>
<td><a href="http://www.fews.net/Pages/marketcenter.aspx?loc=3&amp;gb=ug&amp;l=en">http://www.fews.net/Pages/marketcenter.aspx?loc=3&amp;gb=ug&amp;l=en</a></td>
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<td>Tracks for Africa, PADKOS</td>
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<td>Household Distance to Border Posts</td>
<td>dist_borderpost</td>
<td>Continuous</td>
<td>N/A</td>
<td>N/A</td>
<td>Household distance to nearest land border crossing on main road</td>
<td><a href="http://tracks4africa.co.za/listings/">http://tracks4africa.co.za/listings/</a></td>
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<td>UN COD-FOD</td>
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<td>Household Distance to District Capital</td>
<td>dist_admctr</td>
<td>Continuous</td>
<td>N/A</td>
<td>N/A</td>
<td>Household distance to the headquarter of the district of residence, according to 2006 district boundaries</td>
<td><a href="http://cod.humanitarianresponse.info/">http://cod.humanitarianresponse.info/</a></td>
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<tr>
<td>UC Berkeley</td>
<td>WorldClim Bioclimatic Variables</td>
<td>af_bio_1</td>
<td>Continuous</td>
<td>1960-1990</td>
<td>0.008333 dd</td>
<td>dd</td>
<td>Average annual temperature calculated from monthly climatology, multiplied by 10 (°C)</td>
<td><a href="http://www.worldclim.org/bioclim">http://www.worldclim.org/bioclim</a></td>
</tr>
<tr>
<td>UC Berkeley</td>
<td>WorldClim Bioclimatic Variables</td>
<td>af_bio_8</td>
<td>Continuous</td>
<td>1960-1990</td>
<td>0.008333 dd</td>
<td>dd</td>
<td>Average temperature of the wettest quarter, from monthly climatology, multiplied by 10 (°C)</td>
<td><a href="http://www.worldclim.org/bioclim">http://www.worldclim.org/bioclim</a></td>
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<tr>
<td>UC Berkeley</td>
<td>WorldClim Bioclimatic Variables</td>
<td>af_bio_12</td>
<td>Continuous</td>
<td>1960-1990</td>
<td>0.008333 dd</td>
<td>dd</td>
<td>Total annual precipitation, from monthly climatology (mm)</td>
<td><a href="http://www.worldclim.org/bioclim">http://www.worldclim.org/bioclim</a></td>
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<tr>
<td>UC Berkeley</td>
<td>WorldClim Bioclimatic Variables</td>
<td>af_bio_13</td>
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<td>1960-1990</td>
<td>0.008333 dd</td>
<td>dd</td>
<td>Precipitation of wettest month, from monthly climatology (mm)</td>
<td><a href="http://www.worldclim.org/bioclim">http://www.worldclim.org/bioclim</a></td>
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<td>UC Berkeley</td>
<td>WorldClim Bioclimatic Variables</td>
<td>af_bio_16</td>
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<td>1960-1990</td>
<td>0.008333 dd</td>
<td>dd</td>
<td>Precipitation of wettest quarter, from monthly climatology (mm)</td>
<td><a href="http://www.worldclim.org/bioclim">http://www.worldclim.org/bioclim</a></td>
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<td>ESA and UC Louvain</td>
<td>GlobCover v 2.3</td>
<td>fsrad3_lcmaj</td>
<td>Categorical</td>
<td>2009</td>
<td>0.002778 dd</td>
<td>dd</td>
<td>Majority landcover class within approximately 1km buffer</td>
<td><a href="http://ionia1.esrin.esa.int/">http://ionia1.esrin.esa.int/</a></td>
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<tr>
<td>ESA and UC Louvain</td>
<td>GlobCover v 2.3</td>
<td>fsrad3_agpct</td>
<td>Continuous</td>
<td>2009</td>
<td>0.002778 dd</td>
<td>dd</td>
<td>Percent under agriculture within approx 1 km buffer</td>
<td><a href="http://ionia1.esrin.esa.int/">http://ionia1.esrin.esa.int/</a></td>
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<tr>
<td>IFPRI</td>
<td>IFPRI standardized AEZ based on elevation, climatology</td>
<td>ssa_aez09</td>
<td>Categorical</td>
<td></td>
<td>0.008333 dd</td>
<td>dd</td>
<td>Agro-ecological zones created using WorldClim climate data and 0.0833dd resolution LGP data from IIASA.</td>
<td><a href="http://harvestchoice.org/production/biophysical/agroecology">http://harvestchoice.org/production/biophysical/agroecology</a></td>
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<td>NASA</td>
<td>SRTM 90m</td>
<td>srtm_uga</td>
<td>Continuous</td>
<td>0.000833 dd</td>
<td>Elevation (m)</td>
<td>ftp://xftp.jrc.it/pub/srtmV4/arcasci/</td>
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<td>USGS</td>
<td>Slope (percent)</td>
<td>slopepct_uga</td>
<td>Continuous</td>
<td>0.008333 dd</td>
<td>Derived from 90m SRTM, aggregated to 1km block</td>
<td><a href="http://pubs.usgs.gov/of/2007/1188/">http://pubs.usgs.gov/of/2007/1188/</a>, data provided USGS upon request</td>
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<td>ASFIS</td>
<td>Topographic Wetness Index</td>
<td>twi_uga</td>
<td>Continuous</td>
<td>0.000833 dd</td>
<td>Downloaded from ASFIS 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.</td>
<td><a href="http://www.ciesin.columbia.edu/afsis/bafsis_fullmap.htm#">http://www.ciesin.columbia.edu/afsis/bafsis_fullmap.htm#</a></td>
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<td>LSMS-ISA</td>
<td>Terrain Roughness</td>
<td>srtm_uga_5_15</td>
<td>Categorical</td>
<td>0.000833 dd</td>
<td>Derived from 90m SRTM using 15 Meybeck relief classes and 5x5 pixel neighborhood</td>
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<td>FAO</td>
<td>Harmonized World Soil Database</td>
<td>SQ1</td>
<td>Categorical</td>
<td>0.083333 dd</td>
<td>Nutrient availability</td>
<td><a href="http://www.iiasa.ac.at/Research/LUC/External-World-soil-database/HTML/">http://www.iiasa.ac.at/Research/LUC/External-World-soil-database/HTML/</a></td>
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<td>Harmonized World Soil Database</td>
<td>SQ2</td>
<td>Categorical</td>
<td>0.083333 dd</td>
<td>Nutrient retention capacity</td>
<td><a href="http://www.iiasa.ac.at/Research/LUC/External-World-soil-database/HTML/">http://www.iiasa.ac.at/Research/LUC/External-World-soil-database/HTML/</a></td>
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<td>Harmonized World Soil Database</td>
<td>SQ3</td>
<td>Categorical</td>
<td>0.083333 dd</td>
<td>Rooting conditions</td>
<td><a href="http://www.iiasa.ac.at/Research/LUC/External-World-soil-database/HTML/">http://www.iiasa.ac.at/Research/LUC/External-World-soil-database/HTML/</a></td>
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<td>SQ4</td>
<td>Categorical</td>
<td>0.083333 dd</td>
<td>Oxygen availability to roots</td>
<td><a href="http://www.iiasa.ac.at/Research/LUC/External-World-soil-database/HTML/">http://www.iiasa.ac.at/Research/LUC/External-World-soil-database/HTML/</a></td>
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<td>Harmonized World Soil Database</td>
<td>SQ5</td>
<td>Categorical</td>
<td>0.083333 dd</td>
<td>Excess salts</td>
<td><a href="http://www.iiasa.ac.at/Research/LUC/External-World-soil-database/HTML/">http://www.iiasa.ac.at/Research/LUC/External-World-soil-database/HTML/</a></td>
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<td>Harmonized World Soil Database</td>
<td>SQ6</td>
<td>Categorical</td>
<td>0.083333 dd</td>
<td>Toxicity</td>
<td><a href="http://www.iiasa.ac.at/Research/LUC/External-World-soil-database/HTML/">http://www.iiasa.ac.at/Research/LUC/External-World-soil-database/HTML/</a></td>
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<td>Harmonized World Soil Database</td>
<td>SQ7</td>
<td>Categorical</td>
<td>0.083333 dd</td>
<td>Workability (constraining field management)</td>
<td></td>
<td><a href="http://www.iiasa.ac.at/Research/LUCC/External-World-soil-database/HTML/">http://www.iiasa.ac.at/Research/LUCC/External-World-soil-database/HTML/</a></td>
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<tr>
<td>NOAA CPC</td>
<td>Rainfall Estimates (RFE)</td>
<td>anntot_avg</td>
<td>Continuous</td>
<td>2001-2010</td>
<td>0.1 dd</td>
<td>Avg 12-month total rainfall (mm) for Jan-Dec</td>
<td>ftp://ftp.cpc.ncep.noaa.gov/fews/newalgo_est_dekad/</td>
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<tr>
<td>NOAA CPC</td>
<td>Rainfall Estimates (RFE)</td>
<td>wetQ_avg</td>
<td>Continuous</td>
<td>2001-2010</td>
<td>0.1 dd</td>
<td>Avg rainfall (mm) in wettest quarter within Jan-Dec, or Jan-Jun for bimodal</td>
<td>ftp://ftp.cpc.ncep.noaa.gov/fews/newalgo_est_dekad/</td>
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<td>NOAA CPC</td>
<td>Rainfall Estimates (RFE)</td>
<td>wetQ_avgstart</td>
<td>Continuous</td>
<td>2001-2010</td>
<td>0.1 dd</td>
<td>Avg start of wettest quarter in dekads 1-36, where first week of January = 1</td>
<td>ftp://ftp.cpc.ncep.noaa.gov/fews/newalgo_est_dekad/</td>
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<td>NOAA CPC</td>
<td>Rainfall Estimates (RFE)</td>
<td>anntot_2011</td>
<td>Continuous</td>
<td>2011</td>
<td>0.1 dd</td>
<td>12-month total rainfall (mm) in Jan-Dec, starting January 2011</td>
<td>ftp://ftp.cpc.ncep.noaa.gov/fews/newalgo_est_dekad/</td>
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<td>Rainfall Estimates (RFE)</td>
<td>wetQ_2011</td>
<td>Continuous</td>
<td>2011</td>
<td>0.1 dd</td>
<td>Rainfall (mm) in wettest quarter within Jan-Dec 2011, or Jan-Jun for bimodal</td>
<td>ftp://ftp.cpc.ncep.noaa.gov/fews/newalgo_est_dekad/</td>
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<td>NOAA CPC</td>
<td>Rainfall Estimates (RFE)</td>
<td>wetQ2_2011</td>
<td>Continuous</td>
<td>2001-2010</td>
<td>0.1 dd</td>
<td>Start of wettest quarter in dekads 1-36, where first week of January 2011 = 1</td>
<td>ftp://ftp.cpc.ncep.noaa.gov/fews/newalgo_est_dekad/</td>
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<tr>
<td>NOAA CPC</td>
<td>Rainfall Estimates (RFE)</td>
<td>wetQ2_avgstart</td>
<td>Continuous</td>
<td>2011</td>
<td>0.1 dd</td>
<td>Avg rainfall in wettest quarter in second growing season Jul-Dec, bimodal only</td>
<td>ftp://ftp.cpc.ncep.noaa.gov/fews/newalgo_est_dekad/</td>
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<td>Rainfall Estimates (RFE)</td>
<td>wetQ2_avg</td>
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<td>2011</td>
<td>0.1 dd</td>
<td>Avg start of wettest quarter in second growing season in dekads, bimodal only</td>
<td>ftp://ftp.cpc.ncep.noaa.gov/fews/newalgo_est_dekad/</td>
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<td>Rainfall Estimates (RFE)</td>
<td>wetQ2_2011</td>
<td>Continuous</td>
<td>2011</td>
<td>0.1 dd</td>
<td>Rainfall (mm) in wettest quarter in second growing season of 2011, bimodal only</td>
<td>ftp://ftp.cpc.ncep.noaa.gov/fews/newalgo_est_dekad/</td>
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<td>wetQ2start_2011</td>
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<td>2011</td>
<td>0.1 dd</td>
<td>Start of wettest quarter in second growing season in dekads 19-36, bimodal only</td>
<td>ftp://ftp.cpc.ncep.noaa.gov/fews/newalgo_est_dekad/</td>
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<td>NASA / Boston</td>
<td>University MOD12Q2</td>
<td>Land Cover Dynamics (PHENOLOGY)</td>
<td>rf_regime</td>
<td>Categorical</td>
<td>2001-2010</td>
<td>0.004176 dd</td>
<td>District-level assignment of predominantly bi-modal or uni-modal growing season, derived from phenology data</td>
<td>ftp://e4ftl01.cr.usgs.gov/MOTA/MCD12Q2.005</td>
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<tr>
<td>NASA / Boston</td>
<td>University MOD12Q2</td>
<td>Land Cover Dynamics (PHENOLOGY)</td>
<td>eviarea_avg</td>
<td>Continuous</td>
<td>2001-2010</td>
<td>0.004176 dd</td>
<td>Avg total change in greenness in main, or first, growing season, avg by district</td>
<td>ftp://e4ftl01.cr.usgs.gov/MOTA/MCD12Q2.005</td>
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<tr>
<td>NASA / Boston</td>
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<td>Land Cover Dynamics (PHENOLOGY)</td>
<td>evimax_avg</td>
<td>Continuous</td>
<td>2001-2010</td>
<td>0.004176 dd</td>
<td>Avg EVI value at peak in main, or first, growing season, avg by district</td>
<td>ftp://e4ftl01.cr.usgs.gov/MOTA/MCD12Q2.005</td>
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<tr>
<td>NASA / Boston</td>
<td>University MOD12Q2</td>
<td>Land Cover Dynamics (PHENOLOGY)</td>
<td>grn_avg</td>
<td>Continuous</td>
<td>2001-2010</td>
<td>0.004176 dd</td>
<td>Avg onset of greenness increase in day of year 1-356, avg by district</td>
<td>ftp://e4ftl01.cr.usgs.gov/MOTA/MCD12Q2.005</td>
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<td>NASA / Boston</td>
<td>University MOD12Q2</td>
<td>Land Cover Dynamics (PHENOLOGY)</td>
<td>sen_avg</td>
<td>Continuous</td>
<td>2001-2010</td>
<td>0.004176 dd</td>
<td>Avg onset of greenness decrease in day of year 1-356, avg by district</td>
<td>ftp://e4ftl01.cr.usgs.gov/MOTA/MCD12Q2.005</td>
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<td>University MOD12Q2</td>
<td>Land Cover Dynamics (PHENOLOGY)</td>
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<td>Continuous</td>
<td>2011</td>
<td>0.004176 dd</td>
<td>Total change in greenness within main, or first, growing season 2011</td>
<td>ftp://e4ftl01.cr.usgs.gov/MOTA/MCD12Q2.005</td>
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<td>2011</td>
<td>0.004176 dd</td>
<td>EVI value at peak of greenness within main, or first, growing season 2011</td>
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<td>Continuous</td>
<td>2011</td>
<td>0.004176 dd</td>
<td>Onset of greenness increase in day of year in 2011, avg by district</td>
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<td>Land Cover Dynamics (PHENOLOGY)</td>
<td>eviarea2_avg</td>
<td>Continuous</td>
<td>2001-2010</td>
<td>0.004176 dd</td>
<td>Avg total change in greenness in second growing season, avg by district</td>
<td>ftp://e4ftl01.cr.usgs.gov/MOTA/MCD12Q2.005</td>
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<td>NASA / Boston</td>
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<td>2001-2010</td>
<td>0.004176 dd</td>
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<td>NASA / Boston University</td>
<td>MOD12Q2 Land Cover Dynamics (PHENOLOGY)</td>
<td>eviarea2_2011</td>
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<td>0.004176 dd</td>
<td>Total change in greenness within second growing season of 2011</td>
<td>ftp://e4ftl01.cr.usgs.gov/MOTA/MCD-12Q2.005</td>
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<td>EVI value at peak of greenness within second growing season of 2011</td>
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<td>Onset of greenness increase in second growing season of 2011, avg by district</td>
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<td>Onset of greenness decrease in second growing season of 2011, avg by district</td>
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