

ADMINSTERING THE BASELINE CENSUS

1. PURPOSE

This document describes the process of administering the baseline household census. The purpose of the census is to quantify the population size of DeWorm3 sites, to establish a socio-demographic database that constitutes the sampling frame necessary for subsequent DeWorm3 studies, and to inform the establishment of clusters for the implementation of DeWorm3.

2. INTENDED USERS

The intended users of this SOP are the census team, the data management team, and other relevant Deworm3 staff members.

3. RESPONSIBILITIES

All DeWorm3 personnel should understand and follow this SOP during census administration. It is the responsibility of the site principal investigators (PI) to ensure that study staff comply with this SOP when administering the baseline census.

4. DEFINITIONS

- 4.1. **DeWorm3 census:** The most recent exhaustive survey of all inhabitants living in the DeWorm3 study clusters in the study site, describing key demographic, economic and social attributes of the population.
- 4.2. **DeWorm3 census update:** The annual update of the census, where all households are re-visited and any changes recorded. Additional household members or households that are newly identified in the study area are also added.
- 4.3. **Structure:** A building constituting a single, in the case of a house, or multiple dwellings, in the case of an apartment building.
- 4.4. **Compound:** A group of houses, generally found in a rural setting
- 4.5. **Household:** A person or group of persons, who consider the house their permanent residence, who acknowledge one adult male or female as the head of the household and who share a cooking pot. A household member may travel for work or education, but regularly returns to the household as their primary permanent residence.
- 4.6. **Resident:** An individual that has slept in the targeted geographic area (in this house or another house) for the majority of nights over the past six months prior to the most recent census.
- 4.7. **Present resident:** A resident who is physically present at the time of the census.
- 4.8. **Absent resident:** A resident who is not physically present at the time of the census. They may be in school, work or the shops and will be home in the evening, or they could be living away for studies, or staying in another home on some nights, on a short trip for social or business reasons or be temporarily employed elsewhere. The absence should not exceed six months, or the individual is considered a migrant.
- 4.9. **Migrant:** Members of households in the targeted geographic area who consider the house their permanent residence but have spent the majority of the six months prior to the most recent census living elsewhere for work, education, or other commitments.
- 4.10. **Visitor:** A non-resident person who spent the night in a household the day prior to an enumerator visit to the household, but whose presence in the household is temporary and does not exceed six months.
- 4.11. **Daily visitor:** Individuals who spend every day in the household, but who do not sleep there.

- 4.12. **Household ID Barcode:** A seven-digit unique ID assigned to each household during the census. The household ID is encoded within a barcode/QR and printed on a sticker. For the census, there will be four barcode stickers printed for each household. Each of the four barcode stickers has the same household ID but with a different label for the corresponding step of the consent process: (i) **study** for the Office Copy of the Consent Form; (ii) **hhold** for the Household Copy of the Consent Form (iii) **icard** for the Study Identification Card (iv) **extra** to act as a spare in case one of the others is spoiled.

5. REQUIRED MATERIALS

- 5.1. Smartphones preloaded with SurveyCTO Baseline Census Form
- 5.2. Census Consent Forms in local language
- 5.3. SurveyCTO Household Grouping Form
- 5.4. Folder for filing all completed Census Consent Forms
- 5.5. Four Household ID barcode stickers per household
- 5.6. Study information sheets in local language
- 5.7. Study identification card
- 5.8. Sharpie or other permanent marker
- 5.9. Pen
- 5.10. Inkpad
- 5.11. Clipboard
- 5.12. Power banks for smartphones
- 5.13. Study staff ID and introduction letter

6. PROCEDURE

6.1. Finalization of census form

- a. The village registries compiled according to the *SOP_903. Creating site registries for populating SurveyCTO surveys* should be loaded into the SurveyCTO Baseline Census Form.
- b. The SurveyCTO Baseline Census Form should be fully adapted to the local setting at least one week prior to census administration: the census will be translated to the local language and the SurveyCTO Baseline Census Form must be fully reviewed to ensure that local terms and answer options are tailored according to the local setting. This is responsibility of the Trial Coordinator and Data Manager.
- c. Study supervisors should pilot the SurveyCTO Baseline Census Form at least two weeks before administering the Baseline Census to provide feedback on content and any technical issues.

6.2. Study site demarcation and village-level household numbers

- a. Sites should preemptively identify clear geographic/administrative site boundaries that will indicate to field enumerators which households should be included in the census (i.e. are in the site and will be randomized to DeWorm3 clusters), and which should not be included in the census and are not considered part of the DeWorm3 sites. These boundaries form the permanent boundaries of the DeWorm3 site.
- b. A list of approximate numbers of households per village should be compiled as a key step in the census preparation. This should be completed to aid the household identification and barcode printing process.
- c. The approximate number of households per village may be acquired centrally from the district office or by other means.

6.3. Sensitization

- a. Awareness-raising activities will be targeted at administrative authorities, traditional authorities, and community members.
- b. Sensitization should start at least two weeks prior to census administration and can continue throughout the duration of census administration.
- c. The awareness campaign should include information, educational and communication (IEC) tools in appropriate local languages using a variety of communication strategies (verbal and written materials).
- d. Refer to *SOP_104. Conducting pre-trial sensitization activities* for more details on pre-trial sensitization.

6.4. Recruitment of enumerators

- a. Enumerators should be recruited at least four weeks prior to census administration, to allow for adequate planning and training activities. These individuals should speak the local language and be able to operate mobile smartphones for data collection. *Refer to SOP_106. Recruitment procedures*

6.5. Training of enumerators

- a. Training of pre-selected enumeration staff will be conducted by the trial coordinator and site supervisors.
- b. Training of enumerators should take place approximately two weeks prior to the launch of the census.

6.6. Pilot Census

- a. At least one week prior to full administration, the census should be piloted by all trained field officers, ideally in an area not included in the DeWorm3 study site.
- b. During the pilot, the following aspects of the census should be evaluated: data collection tools, interview techniques and implementation logistics.
- c. Feedback from the pilot census should be provided to the core DeWorm3 team at least 48 hours before the census is to take place.

6.7. Data collection

- a. Administer the census house-to-house throughout the entire site.
- b. Field officers should be assigned to specific geographic areas within the site based upon their ability to speak the local language.
- c. Phones should have at least 50% battery power prior to beginning any interview. Always carry a battery pack in case of low battery.
- d. Census questions will be administered to the head of household, or to a present adult who has provided written informed consent.
- e. Ask and document answers for all survey questions.

6.8. Starting the Census form

- a. Open the SurveyCTO Baseline Census Form and select your name from the list of field officers. Then select the correct geographical administrative area you are currently working in, with the final level being the village.
- b. It is very important to log all structures (whether there are households living in them or not) in the study site, as high-resolution satellite imagery will be used to verify census completion.

- c. On approaching the household in a structure or compound, establish whether this is (a) an individual household in one structure (b) a household in a structure with other households (e.g. apartment) (c) working/studying individuals living together e.g. a hostel – in this case despite eating together each of these adults will be considered separate households as they make their own decisions rather than acknowledging one adult male or female as the head of the household.
- d. If there are no households living in the structure, select [other place]. On selecting [other place] the next screen will ask “what type of place is this?”. Options include building under construction, shop, office, school etc. Collect a GPS point for this structure, record any notes about the structure and then save and finalise the form.
- e. If you are censusing the households in an apartment or a hostel, you will not take a GPS for each household in the structure, but at the end of censusing all households in the structure, the Household ID Barcodes (office/study copy retained by the enumerator) will have to be scanned into the Household Grouping Form to link them together in terms of location. This is important for tracking households later and tracing migration during census updates.

6.9. Status of the household

- a. If the structure looks like it should contain a household, document whether members are present, it is vacant or it appears inhabited but no members are present at the moment.
- b. If vacant, document how you have confirmed this -the report of a neighbour or the guide or because it appears vacant/derelect. Record the address, any landmarks that could help locate it if you had to come back. Take the GPS point, and save and finalise the form.
- c. To record the location of the household by GPS, make sure your GPS is turned on within the smartphone by going into the settings and turning on the location services. Press the grey button ‘Record Location’ to record the coordinates of the household. Make sure this recording is taken just outside the front door, in the open air.
- d. Once the accuracy shows as below 4m, press “record location”. The phone may take a few minutes to get a lower accuracy. During this time, you will see a box called “loading information.” Be patient as the accuracy improves. *Turning on the phone’s Wi-Fi may improve the GPS signal in urban areas. The time needed to get a good GPS signal will improve with each form during the day.*
- e. If you need to record the location again press “replace location”

6.10. Household revisits when no members are present now (cannot confirm whether household is inhabited)

- a. If you cannot confirm at the current visit whether the house is inhabited, record how many times you have visited the house. You must make three independent visits to the house. You will then be asked to note down the address or any landmarks or features that would help you locate the dwelling again if you or another field officer needed to visit again.
- b. After **FIRST OR SECOND VISITS** and having selected [**Revisit needed**] you will be shown a note: You can now save and exit the form. To save a form in order to return to it during a second or third revisit, use the “back” button in the bottom, right corner of the phone. You will be asked if you wish to save changes or ignore changes. **Saving changes** will save the form, so you can re-open it to edit later.

- c. If you save a form, it can be found in the main menu by opening “Edit Saved Form”. Saved forms on your phone will be listed by village and head of household name or another identifying feature. Click on the form to re-open it.
- d. Re-opening the form you can press “resume” and go automatically to the page with the green link to the [*inhabited or vacant dwelling*] page from before: If you are at the dwelling again and are able to update the status, click on the green link and it will take you back to the question where you confirm whether the dwelling is currently inhabited or vacant. Select the appropriate option of the three and continue.
- e. **If this was the THIRD AND FINAL VISIT:** When you come to select the status of the dwelling to finalise the form, select [**No one present at three visits**]. The next screen informs you that you have made three visits and not found anyone home. Add any notes, save and finalise the form.

6.11. Household ID barcodes and establishing whether an adult is present

- a. If members are present, greet the members of the household. The survey form will instruct you to put a barcode sticker with a household ID on two copies of the Census Consent Form (one that will remain with the household and one which will be put in the folder and returned to the office).
- b. For each household you visit, use a different household ID. The stickers are not assigned to individual villages. However, as much as possible use the household IDs in a sequential order.
- c. Each field officer will have a string of household ID Barcode stickers. There will be four copies of each household ID, for example:
1000017–hhold: for the Household’s consent form
1000017–study: for the Study’s consent form
1000017–icard: for the Study ID card
1000017-extra: Spare in case a sticker is spoiled
- d. First scan the **STUDY COPY** of the Census Consent Form with the smartphone. **Click on the grey button “Get Barcode”**. After clicking the grey button, the phone’s display will appear. The grey box will display the image captured by the phone’s camera on the front side.
- e. Make sure you are not covering the camera and hold the phone flat about 6 to 8 cm above the sticker, so the sticker is centred in the image on the screen, in the area within the red circle/line. You will see yellow dots appear on the screen as it tries to read the sticker. The phone will beep (if the sound is on) and the dots will turn green when it has successfully read the sticker. **If the sticker is well lit (stand outside, not in the shade), the barcode may scan faster.**
- f. As a backup and **only if you cannot scan the barcode**, you can enter the sticker ID manually: Enter the first six digits of the sticker to the left of the dash and swipe forward. Then, enter the check digit (the single digit to the right of the dash) and swipe forward. The ID will be displayed, confirm it is the one you entered.
- g. To continue with the census after confirming it is inhabited, written informed consent is required. Consent should be sought from the household head, but if he/she is not present, an adult member of the household can provide consent for the household to participate in the census. **An adult member is anyone 18 years or above.**
- h. First record if there is an adult member present at the household. This will then determine how you proceed with the survey.
- i. If there is no appropriate adult present, select [**No**]. Ask the household members present, if you can return later (i.e. call back) when an appropriate adult member is present. If the household member says “No,” then the household does not consent

to participate. Select **[No]**. Then follow the instructions on the phone and save and finalise the form. Just like where only an adult can consent to take part, only an adult can refuse to let you call back.

- j. If the household members say you can return when an adult member is present, select **[Yes]** on the call back question. Take the GPS coordinates of the house and record landmarks or features that would help you locate the house again if you or another field officer needed to visit again.
- k. Record the status of incomplete or completed survey. In this case, a call back visit is necessary for informed consent with an adult member of the household. Select **[Callback for consent needed]**. Follow the steps in section 6.10 b-d so that you can save and reopen the form later when you return.

6.12. If the household head is present

- a. If there is an adult present, select **[Yes]** for “Is there an adult member of the household present”. Get out a consent form for the household to keep, and stick the barcode with **[hhold]** on it. Then the survey will ask you to scan the sticker on the household copy of the consent form. Follow the steps in section 6.11 d-f to scan the barcode.
- b. **It is crucial that the household ID on the hhold barcode stuck onto the consent form matches the household ID on the study barcode used for the study consent form.**
- c. Seek informed consent from the head of household or participating adult on behalf of the household. Refer to *SOP_201. Census Informed Consent*.
- d. If consent is refused, select **[No, refused]** in the form, and the following screen will say “This household has not consented to participate. Thank them and end the interview.
- e. Write ‘No Consent’ on the back of the household consent form and the study consent form with the sticker and put both in the binder to return to the office. Write the name of the household head / adult who refused consent on each of the consent forms.
- f. **Finalise the form and make sure you write on the study consent form that the adult has refused consent.**
- g. If the adult in the house is not comfortable giving consent at this time and requests you to return, select **[No, not comfortable giving consent]**. The following screen will ask if we can call back later. If they say **[No]** the following screen will say “This household has not consented to participate. Thank them and end the interview”.
- h. If they say yes you can call back, select **[Yes]**. Leave the copy of the information sheet and consent form (without the hhold barcode attached) with the adult you have been speaking to so that they can consult the household head on their return. That way when you call back for consent the household head will have received the information and made a decision.
- i. Take the GPS point and record the status of the survey. In this case, a call back visit is necessary for informed consent with an adult member of the household. Select **[Callback for consent needed]**. Follow the steps in section 6.10 b-d so that you can save and reopen the form later when you return.

6.13. If the household provides consent

- a. If the adult provided consent, select **[Yes]** for “was consent to continue given by an adult member of the household”.

- b. Get out a Study ID Card for the household to keep safely (for example clipped with the child health card for the duration of the study), and stick the barcode with **[icard]** on it. Then the survey will ask you to scan the barcode on the Study ID Card given to the household. Also write the name of the household head/adult who provided consent on the ID card with a permanent marker.
- c. **It is crucial that the household ID on the icard barcode stuck onto the Study ID card matches the household ID on the study and household barcodes used for the study and household consent forms.**
- d. Scan the **ICARD COPY** on the Study ID Card with the smartphone. Follow the steps in section 6.11 d-f to scan the barcode.
- e. Collect the GPS coordinates. Follow the steps in section 6.9 c-e to scan the barcode. Note down the address or any landmarks or features that would help you locate the dwelling again if you or another field officer needed to visit again.

6.14. Entering the household head and members information

- a. Write the name of the head of household. Please take this name from a national ID or health passport if possible. Give three names if possible.
- b. Record the household ownership status - whether it is owned, leased, government built etc. If it is occupied or leased, the survey will ask for the name of the landlord or dwelling owner. This landlord name may help you trace the household again in future.
- c. Enter the household head's phone number. This is collected so that the household can be contacted again for any reason, such as treatment. If the household head does not have a phone but another household member does, you should enter this, as it will assist in contacting the household head
- d. Enter the number of people in the household. It is important that this number is correct, as it will determine how many individual members (according to the definition in section 4.5) the form will allow you to enter.
- e. Enter the first household member. This must be the adult who you explained the study to and who provided consent for the household to participate in the census. **You must also make sure to include the household member who gave consent, even though you have already entered their name once.**
- f. The individual's unique ID will appear. This will be a 9-digit number: The household ID are the first 7 numbers and the last two on the end create the individual unique identifier.
- g. Select the identification card, ration card, health booklet or similar for the household member. Any document with the individual's full name and date of birth will be suitable
- h. Enter the full name of the first household member. Try to record all three names so that the individual can be identified if needed in the future. For this question, add a nickname if the individual is known in the community by another name.
- i. List the relationship of each member to the **HEAD OF HOUSEHOLD**. This information is useful for learning about the make-up of the household. Record the relationship of the member whose name you have entered to the household head.
- j. Enter the sex of the household member.
- k. Enter the age of the household member. If you selected that the household member had an identification document earlier in the survey, the survey will ask you to enter the day of their birth e.g. 06, 21 etc. Enter the day as it appears on their ID document. If the day is not recorded on the document, enter 99. Enter the month of

- birth as it appears on their ID document. Enter the year of birth as it appears on their ID document.
- l. The age of the individual will be calculated and shown on the next screen. Confirm with the individual that this date is correct. If it is incorrect swipe back to correct it.
 - m. If you selected that the household member did not have an identification document earlier in the survey, the survey will ask you to enter Ask the listed household member for his/her age. If he/she is less than 1 year old, select [**<1 year**]. If he/she is 1 year old or older, select [**1 year or older**].
 - n. If less than 1 year, enter the age in months. If 1 year or older, record the age in years **COMPLETED**. This means the number of full years the person has been alive.
 - o. Enter information about the individual's residency status:
 - i. **Present:** Select [yes] if the person is currently in the house or compound at the time of the survey. Do not select yes if they are at school, work, or conducting chores, (e.g. collecting water) or anywhere else outside of the compound.
 - ii. If the person is not currently present, you will be prompted to ask the reason for their absence in the next screen.
 - iii. **Lived here the majority of days in the last 6 months:** Select [yes] if the person is at the house for multiple days in a month or more and select [no] if the individual is away at boarding school or spends extended periods away for work.
 - iv. If the person has not lived here for the majority of the past six months, you will be prompted to ask the reason for their absence in the next screen.
 - v. **Stay here last night:** Select yes if the person slept at the house the previous night.
 - i. If the person did not sleep here last night, you will be prompted to ask the reason for their absence in the next screen.
 - p. If a household member is between the ages of 2 and 18, the survey will ask about whether the individual **attends** a school and the **type of school** they attend.
 - q. If you select nursery / ECD (early childhood education) or Primary, you will then be asked to enter the name of the school. Use the buttons [**contains**], [**matches**], [**starts with**], [**ends with**] to enter the letters of the school name and search for the correct school.
 - r. If the school name does not show up when you use [**contains**] and enter a few letters of the name, select [**school not listed**] and manually enter the name of the school.
 - s. If you select [Primary school], you will then be asked to select the class.
 - t. If the member is an adult, the survey will ask the highest level of schooling completed by the member.
 - u. Once you have entered the information for the first person, the phone will cycle back to enter the information for the next household member
 - v. After all of the household members have been added into the survey, the survey will then remind you to add individuals that spend the majority of the days somewhere else, but calls the household their home. For example, an individual who is away at boarding school or spends extended periods away for work.
 - w. If there are any additional individuals to add to the census, click yes and then scroll back and adjust the number of household members.
 - x. The next question is to record individuals who spend the days in the house but go home to sleep in another location e.g. a house help or child minder. Record the

number of these individuals that regularly visit the household and what their main responsibility in the house.

6.15. Completing the household asset questionnaire

- a. Select the **predominant** flooring material observed, meaning the material that **most** of the floor is made of. Then the roofing material and the wall material.
- b. Select the primary activity(s) that are done by individuals in the household as forms of income. You may select as many as are listed.
- c. Select the main type of fuel the household uses to cook with. Only one can be selected, so select the most commonly used fuel by the household.
- d. Ask if the household has a set of listed items. Each item must have either a [Yes] or [No] selected. For electrical items, only record yes if they are functional, i.e. a functional or working television, radio, etc.
- e. Ask if any member of the household owns any of a set of listed items. To answer [Yes], these items **needs to be owned by at least one of the household members** and do not need to be owned by all of the members.
- f. Confirm whether the household owns any livestock, herds/other farm animals, or poultry. If yes: Enter the number of cows/bulls; other cattle, horses/donkeys; goats; sheep; pigs; chickens; other poultry the household **owns**.

6.16. Completing the water and sanitation questionnaire

- a. Select the main source of drinking water for the household members. The selected answer should reflect the **current primary source of water for drinking**. If there are several sources, probe for which source **provides the household a majority** of its drinking water. If sources vary by season, record main source **at time of interview**.
- b. Determine the type of toilet facility usually used by the household, e.g. pit latrine with open pit/only branches, pit latrine with slab, ventilated improved pit latrine, flush or pour-flush toilet etc.
- c. Ask if the household shares the toilet facility with other households. If the toilet facility used is at a church or school, estimate how many other households use the facility.
- d. Establish where the toilet facility is located, i.e. in dwelling, in plot, elsewhere.
- e. If you have answered all the questions, select the status of the survey as [complete]. If it is not complete, select [other], then record why not complete using free type.
- f. When you get to the end of the survey, ensure that it is finalized (you have ticked the box). **You will not be able to finalize unless all the questions have been answered**. Click [Save Form and Exit].

6.17. Completing the household grouping form.

- a. Open the SurveyCTO Baseline Household Census Grouping Form. and select your name from the list of field officers. Then select the correct geographical administrative area you are currently working in, with the final level being the village.
- b. Collect the GPS point of the apartment block or compound. Stand in front of the main doorway.

- c. Record the building name, house number or landlord for the structure.
- d. Record how many units are contained in the multi-unit structure.
- e. For each unit mark whether they were inhabited or not (if not, not how this was confirmed).
- f. For each household, scan the **STUDY COPY** on the Study consent form with the smartphone. Follow the steps in section 6.11 d-f to scan the barcode.
- g. Make sure you are scanning the correct barcodes for the household group. It is advised that you group all of the consent forms together with a paper clip, by folding them, or by drawing a symbol on the top of the form to demarcate them from other forms that are not part of the group.
- h. Once all households in the structure have been logged, finalise the form.

6.18. Household revisits

- a. If the head of household or alternative adult household member is not present to participate in the census or would like to participate at a different time, schedule a time to return to the household to complete the census.
- b. Make two additional attempts in the week following the first visit to complete the census with the targeted household. If after three visits the census cannot be completed, indicate that the census could not be completed on the household's specific questionnaire form.

6.19. Schedule

- a. The census should take no more than 8 weeks to complete in any site to ensure that data are representative of the same period of time.

6.8. Quality Assurance

- a. Site supervisors will conduct field spot-checks of the enumerators whilst the census is ongoing as well as phone call spot-checks. In total, 10% (5% field checks and 5% phone checks) of the censused households should be spot-checked within a week of the initial enumerator visit. A separate census validation tool shall be used for this.
- b. Data cleaning and management will be ongoing during the census with data shared between the site and central DeWorm3 teams. The site data managers will be responsible for resolving queries sent by the central data management team.
- c. Once completed, the baseline census data should be sent to the DeWorm3 central team who will compare the data against estimated population sizes and high-resolution satellite imagery for consistency checks.