

PAD COVID-19 SURVEY

Instructions to programmers:

Administer sections A-D and H. Administer one of sections E-G at random.

Instructions to surveyors:

Unless otherwise indicated, read the complete question as it is written and wait for the respondent to answer. If they are not understanding the question or unsure of how to respond, try to rephrase the question (while keeping the original meaning). If they are still unsure or are clearly misunderstanding, provide an example of the response (a few options in a list or scale).

CORE SURVEY

Section 0: Pre-survey administration

N	Question	Answer	Adapting notes
01	Surveyor name		
02	Respondent ID		
03	Respondent name [pre-filled]		
04	Respondent phone number [pre-filled]		
05	Call attempt [Surveyor to enter this]	[1-3]	
06	Programme [pre-filled]		
07	Date of survey		
08	Interview start time		
09	Interview end time		
10	What is the phone call status?	<ol style="list-style-type: none">1. Call answered -> Section A. Informed Consent2. Call not answered -> Section Z	

Section A: Informed Consent

Question Number	Question	Answer	Adapting notes
A1	<p><u>Read:</u> Hello, my name is [surveyor name] and I am calling from the [name of service], provided by the [partner] and [Precision Agriculture for Development India Foundation (PADIF)]. Am I speaking to [name in 02]?</p> <p><u>Note for surveyor:</u> If the person you are speaking to is not [name in 02], please request to talk to [name in 02].</p>	<ol style="list-style-type: none"> 1. Yes → A2 2. No → A5 3. Name does not match database. -> A5 98. Don't know/prefer not to answer → A5 	Adapt name of service and providing partners based on local context.
A2	<p><u>Read:</u> We are conducting a survey about the novel coronavirus and its impact on farmers. We would like to ask you some questions about the virus and your perceptions and response as well as impact on your agricultural practices. The survey should take 15 minutes to complete and the information you provide will remain confidential and never connected to you. Your responses will be stored safely and only accessed by a few researchers. Your participation may not benefit you directly, but may benefit others as your responses may inform the response to COVID-19. Your participation is completely voluntary, and there are no penalties for refusing to participate or stopping participation. If you have questions, you can ask them at any time. You may also contact the [Ama Krushi] helpline (number).</p> <p>Do you have any questions now?</p>	<ol style="list-style-type: none"> 1. Yes 2. No 	Adapt name of service and providing partners based on local context.
A2.1	Do you understand everything I have explained?	<ol style="list-style-type: none"> 1. Yes 2. No → A5 	
A3	<p>How old are you?</p> <p><i>SURVEYOR NOTE:</i> If the respondent is younger than 18 years' old, thank them for their time, explain that you cannot survey youths and end the survey. If the respondent is older than 18 years' old, continue the survey. If respondent refuses to share their age, explain that you cannot continue without this. If they still refuse, enter '-98', thank</p>	[Integer]	

	them for their time and move to A5.		
A4	Do you agree to participate in this survey today?	<ol style="list-style-type: none"> 1. Yes -> Next section 2. No-> A5 	

Section B: Demographics

<u>Read:</u> We will begin by asking you a few questions about yourself and your household. Please feel free to say “don’t know” or “prefer not to answer” if you are not comfortable sharing.			
N	Question	Answer	Adapting notes
B1	District		Select country specific and relevant location variables if unavailable in profiling data. Else, prefilled from profiling.
B2	Block		
B3	Panchayat		
B4	Village		
B5	Gender	<ol style="list-style-type: none"> 1. Male 2. Female 98. Don’t know/prefer not to answer	

Section C: Market

<u>Read:</u> In this section, we would like to ask you about your farming practices and activities. Please note that this is just based on your impressions, there is no right or wrong answer.			
C1	<p>What is the most important crop that your household grows (in the current season)?</p> <p><u>Note to surveyor:</u> This is the farmer’s primary crop they are currently growing. If they grow multiple crops, ask them what they consider their primary or most important.</p>	<p>[crop list], N/A (Off-season) → C15</p>	
The following questions refer to the crop you mentioned in C1.			
C2	In which phase of the crop cycle are you?	<ol style="list-style-type: none"> 1. Land preparation 2. Planting 	

	<p><u>Note to surveyor:</u> Please read the options out slowly and ask the farmer to tell you which phase they are in at the moment. If they do not respond, ask them if they are not growing anything right now or are done growing - please select “None of the above” if this is the case.</p>	<ol style="list-style-type: none"> 3. Crop on the farm: Applying inputs, weeding 4. Harvesting 5. Selling <p>96. None of the above (off season) → C6</p> <p>98. Don't know/prefer not to answer → C6</p>	
<p><u>Note to surveyor:</u> These next questions all ask about the respondent's activities relative to the same season last year. Please do not read the option choices out, but instead wait for the respondent to answer and then select the appropriate option.</p> <p>If the respondent does not understand, you can prompt them by asking, “how many days did you spend on this activity this season? Last year, did you spend the same days or more or less?”</p>			
C3	<p>Relative to the same season in the last year, how many days did you and your household members spend on this phase on your farm/field?</p>	<ol style="list-style-type: none"> 1. I was not allowed to go to the farm this year 2. Much fewer days, lowest number of days in past 5 years 3. Fewer days 4. About the same 5. More days 6. Many more days, highest number of days in past 5 years <p>96. Not applicable</p> <p>98. Don't know/prefer not to answer</p>	
C4	<p>Relative to the same season in the last year, how many days did you hire workers to work on this phase on your farm?</p>	<ol style="list-style-type: none"> 1. I was not allowed to hire other people on my farm this year. 2. Much fewer days, lowest number of days in past 5 years 3. Fewer days 4. About the same 5. More days 6. Many more days, highest number of days in past 5 years <p>96. Not applicable</p> <p>98. Don't know/prefer not to answer</p>	

C5	Relative to the same season in the last year, how many days did you and your household members spend on this phase on other people's farms (including plantations)?	<ol style="list-style-type: none"> 1. I was not allowed to work on other people's farm this year 2. Much fewer days, lowest number of days in past 5 years 3. Fewer days 4. About the same 5. More days 6. Many more days, highest number of days in past 5 years <p>96. Not applicable 98. Don't know/prefer not to answer</p>	
C6	Have you visited an agro-dealer or market to purchase any key agricultural inputs in the last two weeks?	<ol style="list-style-type: none"> 1. Yes 2. No → C11 <p>98. Don't know/prefer not to answer</p>	
C6.1	Did you purchase all the inputs you were looking for?	<p>97. Yes → C7 98. No → C6.2</p> <p>98. Don't know/prefer not to answer</p>	
C6.2	Why not?	<ol style="list-style-type: none"> 1. The input was not available 2. The input was too expensive 3. The brand of the input I wanted was not available <p>97. Other, please specify.</p>	
C7	Which key inputs have you purchased in the last two weeks? <u>Note to surveyor:</u> Do not provide option choices unless farmers are having difficulty understanding the question. <u>Note:</u> Please select maximum 3.	<ol style="list-style-type: none"> 1. Fertilizer 2. Seeds 3. Pesticide <p>97. Other, please specify. 98. Don't know/prefer not to answer</p>	Please add options for inputs according to project context.
C7.1	If other, please specify.	[text]	
C8	How much of [key input] did you purchase?	[integer] [unit]	

	<u>Note to surveyor:</u> Please remind the respondent that this is with regards to purchase over the last 2 weeks.		
C9	How much did you pay for that amount? Note to surveyor: If farmer does not wish to disclose, enter “-98”..	[Integer]	
C10	Relative to the same season last year, how does this price compare?	<ol style="list-style-type: none"> 1. Much lower, lowest price in the last 5 years. 2. Lower 3. About the same 4. Higher 5. Much higher, highest price in the last 5 years 96. Not applicable 98. Don't know/prefer not to answer	
C11	Relative to the same season in the last year, how many seeds and inputs (e.g. fertilizer, chemicals) have you used (do you plan to use) for your farm for this crop?	<ol style="list-style-type: none"> 1. Not allowed to go buy inputs 2. Inputs are not available 3. Much fewer, fewest amount in the past 5 years 4. Fewer 5. About the same 6. More 7. Much more, highest amount in past 5 years 96. Not applicable 98. Don't know/prefer not to answer	
C12	Relative to the same season in the last year, how much have you harvested (do you expect to harvest) for your farm for this crop?	<ol style="list-style-type: none"> 1. Not allowed to go harvest. 2. Much less, lowest amount in past 5 years 3. Less 4. About the same 5. More 6. Much more, highest amount in past 5 years 96. Not applicable 98. Don't know/prefer not to answer	
C13	Relative to the same season in the last year, how are /do you expect prices for this crop?	<ol style="list-style-type: none"> 1. Much lower, lowest price in the last 5 years. 2. Lower 3. About the same 4. Higher 	

		<ul style="list-style-type: none"> 5. Much higher, highest price in the last 5 years 98. Don't know/prefer not to answer 	
C14.01	Have you harvested in the last two weeks (at least a portion of your field)?	<ul style="list-style-type: none"> 1. Yes 2. No 98. Don't know/doesn't want to respond 	
C14.02	Have you sold any crops? (in the last two weeks)	<ul style="list-style-type: none"> 1. Yes 2. No -> C14.04 98. Don't know/doesn't want to respond 	
C14.03	Where did you sell it?	<ul style="list-style-type: none"> 1. Local market 2. Middleman 3. Market outside the district 4. Individual consumers/neighbors 5. Government 6. Fish processing unit 97. Other, please specify 	Adapt according to local context.
C14.03.1	Other, please specify.	[Text entry]	
C14.04	Why haven't you sold it?	<ul style="list-style-type: none"> 1. Saving it for family consumption 2. Market is closed 3. No buyers in the market 4. Price offered was too low 5. Waiting for the price to get better 6. No transportation available 7. Not harvested yet 8. I don't have any crop to sell 97. Other, please specify 	

Section D: Consumption

<u>Read:</u> We would like to ask you a few questions about food availability and consumption.			
D1	<p><u>Read:</u> In the past 7 days, have you or any household member experienced any of the following cases?</p> <p><u>Note:</u> Surveyor please read out the options. Please read out each option and pause for the respondent to consider if this applies to them.</p>	<ul style="list-style-type: none"> 1. Difficulties in going to food markets due to mobility restrictions imposed by government 2. Difficulties in buying food due to most food markets being closed 	

		<ul style="list-style-type: none"> 3. Unable to buy the amount of food my household and I usually consume because of shortages in the markets I buy from 4. Unable to buy the amount of food my household and I usually consume because the price of food was too high 5. Unable to buy the amount of food my household and I usually consume because my household income has dropped 6. Had to reduce the number of meals and/or the portion of each meal my household and I would usually eat <p>98. Don't know/prefer not to answer</p>	
D2	<p>Did you attempt to buy [insert staple] in the last 7 days?</p> <p><u>Note to surveyor:</u> Please clarify that this can be from any source - market or ration shops, etc. Please clarify that this is not asking if they succeeded in purchasing, but if they had <i>tried</i> to purchase.</p>	<ul style="list-style-type: none"> 1. Yes -> D3 2. No -> D7 98. Don't know/ prefer not to answer 	For questions D2-D5, insert 1-3 staple food commodities
D3	Was [insert staple] available in the market/store?	<ul style="list-style-type: none"> 1. Yes -> D4 2. No ->D7 98. Don't know/ prefer not to answer 	
D4	How would you describe the price of [insert staple] in the last 7 days?	<ul style="list-style-type: none"> 1. Very low (lowest in 5 years) 2. Low 3. Normal 	

	<u>Note to surveyor</u> : Don't read the answer options, if unclear then ask them to think about if prices are the same or higher or lower. If they say higher or lower, prompt them to ask if it is a little or a lot.	<ul style="list-style-type: none"> 4. High 5. Very high (highest in 5 years) 98. Don't know/prefer not to answer	
D5	How much [insert staple] did you buy?	[Integer] [Unit]	Please specify units.
D6	What was the price that you paid for that amount?	[Integer]	
D7	What percentage of your daily household food consumption comes from your own land or from your kitchen garden?	<ul style="list-style-type: none"> 1. None 2. < 25% 3. 25-50% 4. 50-75% 5. >75% 98. Don't know/prefer not to answer	Optional.
D8	Would you be interested in receiving advisory messages for your kitchen garden?	<ul style="list-style-type: none"> 1. Yes 2. No 98. Don't know/prefer not to answer	Optional (context dependent)

Section E: Behaviour

<u>Read</u> : We would now like to ask you a few questions about your behavior in the last 7 days.			
E1	<p>Have you been able to practice social distancing to keep a distance of two meters from other people in the last 7 days?</p> <p>Please note that this refers to people outside your immediate residential household.</p>	<ul style="list-style-type: none"> 1. Yes -> Next section 2. No -> E2 98. Don't know/prefer not to answer	Adjust wording of the question based on country-specific guidelines.
E2	<p>In which situations were you unable to practice social distancing?</p> <p><u>Note for surveyor</u>: Please select all that apply. Do not read the answer choices. Wait for the respondent to answer and select the appropriate options. If confused, asked them to think about what activities they needed to do in which they had to come into close</p>	<ul style="list-style-type: none"> 1. Working in the fields 2. Farming-related activities outside the house e.g. procuring input or selling crops 3. Other work 4. Going to the market for food 5. Going to the pharmacy 	Add additional options depending on context

	contact with other persons.	6. Going to the hospital / receiving medical treatments 7. Taking care of dependents 8. Meeting friends or relatives 9. Attending a function (wedding, funeral, temple) 10. Becoming tired of being indoors 97. Other, please specify → E2.1 98. Don't know/doesn't want to respond.	
E2.1	If other, please specify.	[text]	

Section F: Knowledge

<u>Read:</u> We would like to ask you some questions about the coronavirus.			
F1	Have you heard about the coronavirus or COVID-19?	1. Yes → F2 2. No → Next section 98. Don't know/prefer not to answer → Next section	
F2	What are the key symptoms of coronavirus? <u>Note for surveyor:</u> Do not read the answer choices. Do not prompt the respondent.	1. Fever 2. Dry cough 3. Persistent cough 4. Tiredness/fatigue 5. Difficulty breathing 6. Loss of smell/taste 7. Headache 8. Sneezing 97. Other, please specify → F2.1 98. Don't know/prefer not to answer	
F2.1	If other, please specify. <u>[For surveyor: separate options with a comma]</u>		
F3	What are the top ways to prevent the spread of the coronavirus? <u>Note to surveyor:</u> Select all that apply. Do not read the option choices. Wait for the	1. Washing hands often 2. Washing hands often with soap 3. Coughing or sneezing into a napkin/elbow	

	<p>respondent to answer and select the appropriate option. If respondent is confused, ask them to think about what types of behaviors or actions they have heard about to prevent coronavirus.</p>	<ol style="list-style-type: none"> 4. Avoid touching eyes, nose and mouth 5. Keeping distance from others/ avoiding crowded areas/ avoiding physical contact (handshakes etc.) 6. Remaining at home/ avoiding non-essential travel 7. Use of face mask <p>97. Other, please specify → F3.1 98. Don't know/prefer not to answer</p>	
F3.1	<p>If other, please specify.</p> <p>[For surveyor: separate options with a comma]</p>		

Section G: Perception

<p><u>Read:</u> This first question is in reference to your own situation. Please answer from your own perspective with regards to yourself and your family.</p>			
G1	<p>What concerns you most about the coronavirus?</p> <p><u>Note to surveyor:</u> Select up to 3. Do not read the option choices. Wait for the respondent to answer and select the appropriate option.</p>	<ol style="list-style-type: none"> 1. I'm not concerned about coronavirus 2. Contracting the disease myself 3. A member of my family contracting the disease 4. Not being able get inputs for my farm 5. Not being able to sell my crops 6. Not having enough work/wage income 7. Not having enough food for the household 8. Not being able send my children to school <p>97. Other, specify 98. Don't know/prefer not to answer</p>	
<p><u>Read:</u> This next part focuses on your perception of public health services and the government's reaction to the situation. Please answer honestly and remember that this will be kept completely confidential.</p>			
G2	<p>How effective do you think social distancing measures are (e.g., through a</p>	<ol style="list-style-type: none"> 1. Not at all effective 2. Slightly effective 	

	general lockdown) for slowing down the spread of the coronavirus?	<ul style="list-style-type: none"> 3. Neither effective nor ineffective 4. Somewhat effective 5. Very effective 98. Don't know/prefer not to answer	
G3	<p>What measures have been implemented in your village?</p> <p>[Please select multiple]</p>	<ul style="list-style-type: none"> 1. Schools are closed 2. Non-essential businesses and shops closed 3. Instructed not to leave home 4. Transport services shut 5. Government offices are closed 6. Temples/religious areas closed 97. Other, please specify. 98. Don't know/prefer not to answer	Add additional options depending on context.

Section H

<u>Read:</u> We have a few final questions regarding your overall thoughts.			
H1	<p>Would you be interested in receiving digital updates about the coronavirus (for example, a weekly pushcall) in addition to the information sources you already have?</p>	<ul style="list-style-type: none"> 1. Yes → H2 2. No → H3 98. Don't know/prefer not to answer → H3	
H2	<p>What types of information do you think would be useful for you to receive.</p> <p>PAD will coordinate with our (government) partners and make every effort to provide you the information you request, but we cannot promise at this point whether and when we will add the content on coronavirus</p> <p><u>Note for surveyor:</u> Select all that apply. Do not read the answer choices and do not prompt the respondent.</p>	<ul style="list-style-type: none"> 1. Public health advice, including prevention and symptoms 2. Updates about government policies and measures, e.g. lockdown 3. News-style updates about number of cases, number of recovered, etc. in the country. 4. Agricultural/market related advisory 5. No preference 97. Other, please specify → H2.1	Add additional options depending on context.
H2.1	If other, please specify.	[text]	
H3	Do you have any other concerns or	<ul style="list-style-type: none"> 1. Yes → H4 	

	thoughts on this situation that you would like to share?	2. No → H5	
H4	What are the concerns or thoughts you would like to share?	[text]	
<u>Read:</u> We would now like to ask you two short questions about your health.			
H5	In the last two weeks, have you experienced fever?	1. Yes 2. No 98. Don't know/prefer not to answer	
H6	In the last two weeks, have you experienced an unusual dry cough and/or difficulty breathing/shortness of breath?	1. Yes 2. No 98. Don't know/prefer not to answer	
<u>Read:</u> We have now completed the survey. Thank you for your time.			

Section Z: Survey status

Z1	<u>For surveyor:</u> Was survey completed?	1. Yes 2. No → Z2	
Z2	<u>For surveyor:</u> Should the respondent be called back?	1. Yes 2. No	
Z3	Reason for incomplete survey	1. Confidentiality concerns 2. No time 3. Respondent did not understand survey 4. Respondent too young or did not share age 5. Refused to confirm identity 6. Wrong respondent/ wrong number 7. Bad signal/could not hear respondent 8. Phone off 9. Not answering 10. Out of service 97. Other (specify) _____	
Z3.1	If other, please specify.	[Text]	

Z4	Are there any other further notes that you want to add to this survey? If not, please leave blank.		
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COVID-19 Survey Data Management Plan

Precision Agriculture for Development

April 2020

Table of contents

[1 Introduction](#)

[2 Guidelines](#)

[3 Data systems](#)

[Table 1: Data Instruments Produced](#)

[Table 2: Data Created](#)

[Table 3: Existing Data Sources Used](#)

[4 Data and metadata protocols](#)

[I. Samples](#)

[II. Identifiers dataset](#)

[III. Raw survey data](#)

[IV. Interview Recordings](#)

[IV. Cleaned, de-identified dataset](#)

[V. Back checks](#)

[a\) Timelines](#)

[b\) Generating back check sample and dataset](#)

[c\) Conducting back checks](#)

[d\) Analyzing and incorporating back checks](#)

[VI. Running HFCs](#)

[VII Data organization](#)

[Version tracking](#)

[Metadata](#)

[5. Summary of Roles and Responsibilities](#)

[Table 4: Project Roles and Responsibilities](#)

[6. Data security and access](#)

1 Introduction

The aim of this data management plan (DMP) is to document the process for creating, storing, and maintaining data associated with PAD's COVID-19 project. Specifically, this DMP outlines systems for:

- Ensuring data searchability, comprehension, quality and security
- Ensuring subjects' privacy, confidentiality and anonymity

This DMP is a live document and will be regularly updated following consultations with international and local IRBs and/or changes to the project's scope.

2 Guidelines

The Health Media Lab IRB has approved PAD to collect and secure data for the COVID-19 project as follows:

Description of Data Collection: Surveyors will receive a list of sampled subjects' phone numbers and names from a secure cloud server. Surveyors will collect data using the ODK Collect application for Android smartphones. No new PII will be collected. The data will be stored in the secure cloud server and will not be directly identifiable, but there will be a code that links to the identifiers (i.e. to the respondents' phone numbers).

Data Safety and Monitoring: Databases will be managed in password-protected computers and stored on an encrypted hosting service. Only PAD researchers, all of whom are certified in human subjects research, will have access to the databases. The code that links the data to the identifiers will be destroyed after 3 years.

Amendment 1: We will ask for farmers' consent to record the phone interviews for back-check purposes in three states in India (Odisha, Haryana and Punjab). The recordings will not include personal identifiers and will be stored on an encrypted hosting service.

3 Data systems

Table 1: Data Instruments Produced

Data	Format	Storage	Software used	Access
Farmer survey instrument	Google Sheets, .xlsx, .xml	Google Drive, Dropbox	Uploaded via ODK Aggregate	Publicly available
Project farmer survey instrument	Google Sheets, .xlsx, .xml	Google Drive, Dropbox	Uploaded via ODK Aggregate	All PAD
Agro-dealer survey instrument	Google Sheets, .xlsx, .xml	Google Drive, Dropbox	Uploaded via ODK Aggregate	Publicly available

Project agro-dealer survey instrument	Google Sheets, .xlsx, .xml	Google Drive, Dropbox	Uploaded via ODK Aggregate	All PAD
Surveyor tracking sheet	Google Sheets, .xlsx	Google Drive, Dropbox	Google Sheets	All PAD
Protocol guide	Google Sheets, .xlsx	Google Drive, Dropbox	Dropbox, Google Docs	All PAD

Table 2: Data Created

Data	Projects	Format	Storage	Software used	Access
Samples	<i>All</i>	.csv, .xlsx	Dropbox, ODK Aggregate, Smartphones	- Generated using Stata - Uploaded to ODK with form	Core team + project research team only
Identifiers dataset	<i>All</i>	.dta	Dropbox	- Generated using Stata	Core team + project research team only
Raw survey data	<i>All</i>	.csv, .dta	Dropbox, ODK Aggregate	- Downloaded via ODK Briefcase using encryption key	Core team + project research team only
Interview recordings	<i>India only</i>	.wav, .aac	Dropbox, WhatsApp	- Recorded via Android recording app - Stored in Dropbox - (possible) Shared via WhatsApp	Core team, project research team, field team (partial)
Cleaned, de-identified survey data	<i>All</i>	.xlsx, .dta	Dropbox	- Cleaned and analyzed using Stata	Core team + project research team only

Table 3: Existing Data Sources Used

Data	Programme	Usage
PAD's activation dataset	All	Generate weekly samples for farmer survey

4 Data and metadata protocols

I. Samples

ROAs will generate samples to be uploaded to ODK and shared with surveyors. The do-file for generating these samples should be stored at 02_do/01_sample. Please generate the sample in the manner requested by

the data manager or person responsible for coding. The sample should be output as a .csv and .dta to 04_dta/01_sample/01_weekly_sample. Please remember to name your samples consistently each week.

After preparing the sample, ROA should update the surveyor's tracking sheets with their assigned subjects. Please only include the unique ID of the respondent and no PII. The template for the tracking sheet can be found [here](#). Tracking sheets should be output to 04_dta/01_sample/02_tracking_sheet. If needed, the tracking sheets can be uploaded to Google Sheets to be shared with surveyors.

When the sample is ready, please alert the data manager or person responsible for uploading the form into ODK Aggregate. Once the form is updated, ask surveyors to get the latest version of the form in ODK Collect, and remove the previous sample csv file from their smartphones.

II. Identifiers dataset

After the ROA generates each week's sample, they should set up a separate do-file under 02_do/0_identifiers that creates an identifiers dataset to be stored under 04_dta/02_identifiers. This do-file will append all the weekly samples, then remove all other information other than unique ID and mobile (or other key variables needed to merge the survey data with activation or profiling datasets). Please remember to keep this dataset up to date.

III. Raw survey data

Note: A more detailed guide to working with ODK data can be found [here](#).

Raw survey data will be stored encrypted in PAD's private ODK Aggregate server. In order to access project survey data, the project ROA will need to pull, export and decrypt the data using the ODK Briefcase app. The data manager will provide, to each, ROA, a secure username and password via LastPass to access PAD's ODK Aggregate server. The data manager will also provide the ROA with their project's private encryption key via Mattermost. **Please save the encryption key in your local drive and do not share it with anyone.**

First, ROAs should pull the encrypted data from PAD's Aggregate server using ODK Briefcase and store it inside the ODK Briefcase Storage folder in their local hard disks. Next, they should export and save the decrypted survey data with PII, in csv format, in the designated folder (03_raw/01_survey_PII). Then, ROAs should run the import do-file generated with *odkmeta* to transform the data set from csv into Stata dta format.

After this, ROAs should run the cleaning do-file which strips the PII from the raw survey data. This is the dataset that should be used for all other purposes.

IV. Interview Recordings

Survey recordings should be moved at the end of each day from surveyors' phones to Dropbox (03_raw/02_survey_recordings_PII) and saved as the respondent's unique ID. Survey recordings should then be deleted from surveyors' phones. Once back checks have been conducted (see Section IV), ROAs must ensure that survey recordings are deleted immediately from Dropbox.

In the situation that a surveyor cannot access Dropbox or does not have sufficient bandwidth to share recordings, they should:

- At the end of the day, the project ROA should download survey data and randomly select 10% of the total surveys
- The ROA should share the selected respondent unique IDs with the back checker and surveyor(s)
- Surveyors should share the recordings for the selected respondent IDs *only* via WhatsApp private message with the back checker
- Surveyors should then delete all recordings off their phones
- Once the back checkers receive the recordings via WhatsApp, they should move them as soon as possible to the assigned folder (03_raw/02_survey_recordings_PII) and delete them off their phone/local storage.

V. Cleaned, de-identified dataset

The cleaning do-file is to be prepared by ROAs and stored in the project folder (02_do/05_cleaning/01_cleaning_survey.do). The cleaning do-file should do the following:

- Generate a non-PII survey dataset. The **non-PII dataset should not include respondents' names and phone numbers. It should include respondents' unique ID.**
- **Do not make any other changes to this dataset.**

VI. Analysis dataset

After generating a “raw” de-identified dataset as per point V above, we will then move on to other cleaning and re-organization of the data in order to prepare the data for analysis. The steps of the cleaning file include:

- Perform any cleaning of text responses
- Consolidate new and old variations of the same variables
- Reshape or organize the data so that there is only one valid attempt per respondent (this should be the last or completed attempt)
- Generate columns for each previous attempt and reason for incompleteness
- Save out the do-file for this:02_do/05_cleaning/02_survey_analysis.do
- Save out this analysis dataset: 04_dta/05_analysis/01_survey_analysis.dta.

VI. Back checks

a) Timelines

Please aim to run back checks on 10-20% of a surveyor's completed surveys and 10 - 20% of incomplete surveys. During the first two weeks of implementation, aim to administer back checks within two days so that any errors can be swiftly addressed.

b) Generating back check sample and dataset

Details of the back checks may vary by project and method of data collection. The steps for back checks include:

- At the end of each day, the ROA will generate a random sample of 10% of incomplete surveys and 10% of completed surveys *with recordings* (if recordings are available) using the non-PII survey data. Back checks of both types should be stratified by the enumerator. The do-file will be stored under 02_do/06_back_checks.
- The ROA will then output the back check dataset (which contains cleaned, de-identified survey data for only the back check sample) into another folder (04_dta/04_back_checks/01_data/01_survey).
- The ROA will also move recordings for the selected back checks into another folder (04_dta/04_back_checks/01_data/02_recordings). In some cases, the ROA may need to share the issue log described below with the back checker before moving recordings in case the surveyors were not able to share the recordings on Dropbox yet.
- The ROA will then prepare an issue log (see template [here](#)) with the UID of the selected surveys to share with the back checker on Dropbox (or Google Sheets if needed - but this should be updated to Dropbox and deleted as soon as possible). The issue log should be stored under 04_dta/04_back_checks/02_issue_log).
- For incomplete survey backcheck samples, some calls may require the back checker to call the respondent back. For these select respondents, the phone number and name of the respondent should be exported to the issue log as well (please see the example). Extra care should be taken to ensure that the issue log is only stored within Dropbox.

c) Conducting back checks

Once the back checker has the necessary items to begin the back checking process, they can follow these guidelines:

- For completed surveys with recordings:
 - The back-checker will listen to the assigned recording, and ensure that the survey was administered carefully (paying special attention to key variables or difficult questions that include skip patterns).
 - Back checker will update the issue log with details of any issues encountered. They should note the question number, error type and add any additional detail of the error they notice.
- For completed surveys without recordings:
 - The back-checker will call the assigned phone number and get the original respondent on the phone. The back-checker will ask if the survey was administered and a series of key questions which answers would be static between the original survey and the back-check survey. Back-checker will then submit the survey for review.
 - An RA will run the original data collected against the back-check data and check for inconsistencies. Inconsistencies will be logged and addressed by the Field Manager and original enumerator.
- For incomplete surveys:
 - If the reason code states the number was unreachable: try to reach the number, if you get through, *administer the survey if possible*. If unreachable after three attempts, then continue.

- If the reason code states the farmer refused to give consent for any reason: ask the farmer if they were contacted and understood the consent statement. Ask them why they refused consent and if they asked questions to the surveyor. If after speaking, they agree to the survey, *administer the survey if possible*. If they still are not willing, continue.
- If the reason code states the farmer was too busy or couldn't speak: ask the farmer if they were contacted more than once by a surveyor to attempt the survey. If they were not, flag this survey/surveyor. Ask the farmer if they would be willing to complete the survey at that time, if yes, *administer the survey if possible*.
- If the reason code states that the survey is incomplete (in this case there may be a recording available), try to call back the farmer and attempt to complete the survey if possible.
- Everything should be logged in the issue log.

d) Analyzing and incorporating back checks

On a regular basis or at least once a week, the ROA should review the issue log to identify any patterns in problems. The ROA should use their discretion to raise any larger issues with the RM.

Once a week, the team should also hold a feedback session with surveyors to address any findings from back checks or ask for additional feedback.

VII. Running HFCs

A base code for high frequency checks will be developed and stored in the “templates” folder. RMs and ROAs should work to adapt the code according to your survey adaptations, but try to make as few adaptations to the code as possible. HFCs may include:

- Duplicated completed surveys
- Completed surveys by [day/week] and [surveyor/supervisor]
- Completed surveys by [location]
- Attempts per farmer by surveyor
- Consent rates by surveyor
- Rejection rates
- Survey duration by surveyor
- Form version
- Logic skip checks [TBC] by surveyor
- Doesn't know/prefer not to answer rates by surveyor
- Outliers in input and crop prices and quantities by surveyor
- Specify, other question type

The HFC needs to be run by the ROA on a daily or weekly basis (as discussed by the team). If you notice any unusual skip patterns or patterns by surveyor, please report this immediately to the RM so you can flag this and follow up with the surveyor or flag this to be checked and discussed.

VIII. Data organization

All projects will store their survey data and associated files within the “COVID-19 Survey” folder in PAD’s Dropbox. Each project research team will have access to the templates folder and their own project folder. Aggregated data will be stored in a limited access folder.

Project teams should adhere to the following guidelines when working within project folders.

- 00_admin
 - 00_readme: contains Read-me’s and other project documentation such as codebooks
 - 01_survey_instruments: contains survey document (.docx)
- 01_xlsform
 - 01_forms: contains .xlsx and .xml survey instruments for uploading and any archived versions
 - 02_prefill: contains all weekly samples produced by RAs
- 02_do
 - 01_sample: contains do-file for generating weekly sample and back check sample
 - 02_identifiers: contains do-file for generating sample
 - 03_generate_import_do_file: contains do-files to run *odkmeta* Stata command to generate import do-file.
 - 04_import: contains do-files generated with *odkmeta* Stata command to import data from csv to dta using the metadata of the xlsform
 - 05_cleaning: contains do-file for cleaning survey data
 - 06_back_checks: contains do-file for generating back checking dataset and issue logs
 - 07_hfc: contains HFC do-file
 - 08_analysis: contains do-file for any weekly reporting or analysis
- 03_raw
 - 01_survey_PII
 - 02_survey_recordings_PII
- 04_dta
 - 01_sample: contains any .dta files associated with samples
 - 01_weekly_sample
 - 02_tracking_sheets
 - 02_identifiers: contains identifiers dataset
 - 03_cleaning: contains cleaned survey data
 - 04_back_checks: contains back checking data and tracking sheets
 - 01_data
 - 01_survey
 - 02_recordings
 - 02_issue_log
 - 05_analysis: contains any .dta files produced for analysis

- temp: contains any temporary or intermediary datasets (non-essential and generated within do-files)
- 05_out
 - 01_log: contains any log files produced
 - 02_sample: contains final sample lists (.dta or .xlsx)
 - 03_analysis: contains any output from analysis including weekly reports, formatted tables or graphs etc.
 - 04_hfc: contains hfc output
- 06_pilot: contains all pilot related material
 - 01_do
 - 01_sample: contains do-file for generating weekly sample and back check sample
 - 02_identifiers: contains do-file for generating sample
 - 03_cleaning: contains do-file for cleaning survey data
 - 02_raw
 - 01_survey_PII
 - 02_survey_recordings_PII
 - 03_dta
 - 01_sample: contains any .dta files associated with samples
 - 01_weekly_sample
 - 02_tracking_sheets
 - 02_identifiers: contains identifiers dataset
 - 03_cleaning: contains cleaned survey data
 - temp: contains any temporary or intermediary datasets (non-essential and generated within do-files)

In general, the folder structure should follow conventional best practices, including: parallel structure in naming (data and output produced by do-files should have the same or similar naming so they can be identified) and archiving any older versions of datasets or documents.

IX. Version tracking

Survey instruments to be edited before, during, and after piloting. Versions to be saved with “_v#” and older versions that are no longer in use to be moved to the respective archive folder. Version tracking to be documented in metadata as needed.

Version tracking sheets for all projects can be found in 00_templates/00_admin.

X. Metadata

Maintaining metadata is important for internal documentation as well as for data sharing purposes. For this project, metadata should be generated for the core survey and for project-specific surveys, in the form of a Read-Me .docx. The core Read-Me should contain the following:

- Title

- Date created and date(s) modified
- Author(s)
- List of all project do-files, documents and datasets with storage location/URL and purpose
- Information on partners and funders
- Access information
- Codebook for survey instrument(s), which can be attached in a separate .xlsx or .csv file
 - Variable name, label, any other notes

The Read-Me for projects should contain the following information:

- Title
- Date created and date(s) modified
- Author(s)
- List of all project do-files, documents and datasets with storage location/URL and purpose
 - Codebook only required if any variables specific to the project or generated by the project for analysis
- Information on partners and funders
- Access information
- Language
- Any other relevant notes on methodology

5. Summary of Roles and Responsibilities

Table 4: Project Roles and Responsibilities

Role	Responsibilities	Access
Data Manager	<ul style="list-style-type: none"> ● Code survey instruments ● Upload instruments to ODK ● Upload sample to ODK ● Generate and share encryption keys for uploading and downloading data ● Generate HFC template ● Maintain data security and management processes 	<i>All data</i>
Project Research Managers	<ul style="list-style-type: none"> ● Adapt survey instruments to local contexts ● Oversee survey implementation within and across teams ● Review data quality checks (back-check logs and HFCs) ● Ensure all research activities have obtained the required IRB and government approvals ● Quality-ensure internal reporting 	<i>All project specific data</i>

Project Research Associates	<ul style="list-style-type: none"> • Produce weekly samples • Clean and de-identify data regularly • Ensure raw data with PII and cleaned data without PII are stored separately • Generate a sub-sample of survey respondents for back-checking and review back-check logs • Adapt and run HFCs weekly • Produce internal reporting 	<i>All project specific data</i>
Field supervisors/ survey supervisors	<ul style="list-style-type: none"> • Provide training to surveyors • Pilot survey instrument and report issues • Conduct/ coordinate regular back checks • Relay feedback from back checks/ HFCs to surveyors 	Project-specific: Back check survey data Back check recordings

6. Data security and access

Table 5: Datasets containing personally identifying information (PII) and storage, access and protection protocols

Data	PII contained	Storage	Access	Protection
Identifiers datasets	Mobile number	Stored in project folders	Limited to programme RMs, ROAs and core team	Limited access
Raw survey dataset	Mobile number, name	Stored in project folders	Limited to programme RMs, ROAs and core team	Can only be downloaded using encryption key only available to ROAs; stripped of PII immediately and only non-PII data used for other purposes
Interview recordings	Voice	Stored on surveyor mobile phones, stored in project folders, stored on supervisor phones (possible)	Project teams, core team	Recordings not selected for back checks deleted from phones immediately, only selected recordings stored on Dropbox and shared with back

				checker, all recordings deleted once back checks complete
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Precision Agriculture for Development - COVID-19 Phone Survey Protocol

6 April 2020

Welcome to the PAD'S COVID-19 phone survey protocol! This document was written to help surveyors understand the project's protocol and guidelines. If you have any questions, please reach out to your Supervisor.

[Summary of surveying process](#)

[How to address different call scenarios](#)

[Common respondent questions and answers](#)

[Materials](#)

I. Summary of surveying process

Before starting each call, please make sure that:

1. Your team has provided you with a tracking sheet with the list of respondents you need to call that week. This list should have the respondents' unique ID only. You should aim to call all of the numbers on the list.
2. You have a fully charged phone, tablet or computer with the correct version of the survey in ODK. If you are unsure about which version of the survey you should be using, please ask your team
3. Your device has the correct date and time.
4. You are in a quiet environment and that your headphones are working

When attempting each call, please follow these steps:

1. Record each call attempt in the tracking sheet and submit a survey for each call attempt. If a respondent does not answer or is busy, please try again at least 3 hours later. If a respondent does not answer or is busy on the second attempt, try again on the next day. **Please try a maximum of three times.**
2. If the respondent does not answer or is busy on the third attempt, move on to the next respondent. At the end of the week, you should have at least one but up to three surveys submitted for each respondent. This should be reflected on both the tracking sheet and survey.

When you begin a call, please follow these steps:

1. Introduce yourself and read out the introductory statement as per the survey.
2. Confirm the respondent's identity by asking them their name and checking that it matches the name in the survey. If you are speaking with the correct respondent, continue the survey. If the respondent's identity does not match, ask if you can speak to the person listed in the survey:
 - a. If the respondent says that the person listed in the survey is not available at this time, ask if you can call back later.
 - b. If the respondent says that the person listed t does not live with them or is unknown to them, thank them for their time and record this in the survey (**Section Z**)
3. Read out the consent statement exactly as written. If the respondent has any further questions, please refer to the section below (*Common questions and answers*) and respond as closely as possible.
4. Next, ask the farmer if they understood you completely. If the farmer says no, ask them what they did not understand and attempt to explain. However if the farmer still does not understand, do not proceed with the survey and record this in **Section Z**.
5. Next, ask the farmer their age. If they are under 18 or refuse to tell you their age, please thank them for their time and say you cannot continue with the survey and record this in **Section Z**.
6. Next, ask the farmer for their consent in **Section Z**. If they give their consent, continue. If they refuse, then ask them their reason and try to address it if possible (e.g. they are concerned about confidentiality). If they still refuse, thank them for their time and record this in **Section Z**.
7. Next, ask the farmer for permission for recording (if your team is recording). If they give their consent, continue with the recording. If they do not consent, continue with the survey but stop the recording and delete it immediately.

At the end of every day, please ensure that:

1. You have a submitted survey per each attempt you made.
2. Your tracking sheet is correctly filled with all attempted calls - you should know who you need to attempt to call again tomorrow.
3. You provide a summary to your supervisor of any issues that you faced that day. If you have any incomplete surveys, you should also provide a summary of why.
4. You have transferred all required recordings to your supervisor via Dropbox or WhatsApp and **deleted them from your phone.**

II. How to address different call scenarios

Remember: you need to submit a survey for every attempted call. This means that there could be up to 3 surveys submitted per respondent.

1. What do you do when you call a respondent and the phone is turned off, the respondent is not picking, or the telephone has no network?
 - If you do not reach a respondent on the first attempt, make 1 more attempt at least 3 hours later (for example, call at 9am, 12pm). If you do not reach a respondent on the second attempt, try again on the next day.
 - If you have tried 3 times to reach a respondent over two days and still cannot reach them, move on to the next assigned respondent.
2. What do you do when a respondent says they are too busy to participate in the survey?
 - Ask the respondent if you can call back later. If they say no, record this in **Section Z**. If they say yes, then call back at least 3 hours later.
3. What do you do when there is a poor network connection during a call/phone hangs up?
 - Politely ask the respondent to move to a place with better network connection.
 - If the connection is still bad ask the respondent if you can call back later. If they say no, record this in **Section Z**. If they say yes, then call back at least 3 hours later.
4. Respondent unwilling or doesn't trust PAD
 - If the respondents declines to consent because they are worried about confidentiality, the enumerator should first assure the respondent about our confidentiality policy, explain the purpose of the study again and the huge importance of their participation. Emphasize that no one will know if they have taken the survey or their responses.
 - If this doesn't help and the respondent still refuses to participate, thank the respondent for their time and record the reason for their refusal on the survey form.

5. What do you do when the person that answers the call has a different name to that in the tracking sheet?
 - Ask if you can speak to the person that is listed in the tracking sheet. If the respondent says that the person listed in the tracking sheet is not available at this time, ask if you can call back later.
 - If the respondent says that the person listed in the tracking sheet does not live with them or is unknown to them, thank them for their time and record this in the survey (**Section Z**)
6. What do you do when the person doesn't answer but calls back?
 - Please thank the person for calling back and provide a brief summary of your reason for calling. Please inform them that they are on the list for call back and you will be reaching out to them to request their participation in the survey soon. Do not complete a survey and do not record this as an attempt.
7. What to do if you complete a survey half way and the call cuts or gets disconnected?
 - In this case, please keep the form on edit and do not submit. If it was your 1st attempt, make two more attempts to call (following the spacing rules set out above). If it was your 2nd attempt, make one more attempt to call. If this was your third attempt, you should still make one more attempt to call back and complete the survey. However, if you cannot connect and complete the survey, please indicate incomplete in **Section Z** and submit. Do not record a separate attempt for completing the survey.

III. Common respondent questions and answers

This section provides responses to some common questions that may be raised by respondents. Please try to follow these responses as closely as possible.

1. What is Precision Agriculture for Development?

Precision Agriculture for Development is a non-governmental non-profit organization that supports smallholder farmers through providing customized agricultural advisory. We partner with local organizations or governments to provide these services to farmers across many locations. In [project state/country], we work with [partners] and provide the [service name] that you are subscribed to.

2. Is this service provided by the government?

[Project dependent]

We have partnered with the local [state/central] government in order to provide the [service name].

3. Will my information or responses be shared with the government?

[Project dependent]

We will never share names or individual responses with anyone. Your responses, along with many other farmers' responses from different parts of the state and country, might help the government to understand the challenges you and others are facing.

4. [Respondent name] is not here but I am his [relation] and I can answer any questions. Why can't I complete the survey?

I understand, however, it is important for us to ensure that we are speaking with the same farmer that is registered onto our service. Please could you try to call the respondent to the phone, or I am happy to call back at another time.

5. What will I receive for completing this survey?

Your responses will allow us to better understand what challenges you are facing and may help to improve state-level or country-wide responses to this situation. Unfortunately, we will not be able to provide any other benefit for taking this survey, but please remember that the survey will only last up to 20 minutes and will ensure that your voice and challenges are heard.

6. Why do you need to know my age?

I understand your concern. Please be assured that we are only requesting your age in order to make sure that you are able to provide consent for taking this survey. We will not use your age for any other reason. Unfortunately, if you are unable to share your age, we cannot move forward with the survey.

7. Will you provide me information related to the coronavirus?

We cannot promise that we will be able to provide this information, but we will try our best to understand your information challenges and needs, and will try to work with our local partners and agronomists to try to improve our service and provide advice and information that is useful for you in this situation.

8. Will you provide me information related to government schemes or aid?

[Project dependent]

We cannot promise that we will be able to provide this information, but I want to assure you that we will try our best to understand your information challenges and needs, and will try to work with our local partners to provide information that is useful for you in this situation.

9. I already received a call from someone from the same organization, why are you calling again?

I understand, please could you confirm the name of the organization or number from which you received a call? If not, could you let me know the general questions that you were asked. I would like to confirm that it was the same survey, so that we do not need to repeat the process.

If you are calling for back checks:

I understand that you have already completed a survey with our organization. Thank you for taking the time for that. I am calling today to ensure that you were contacted and to ensure that your responses were recorded accurately. This will only take 10 minutes of your time and will ensure that your responses were understood correctly.

IV. Materials

[Surveyor tracking sheet - template](#)