

## ANNEXURE

### ANNEXURE 1: RNR CENSUS QUESTIONNAIRE

#### RENEWABLE NATURAL RESOURCES CENSUS 2019



*RNR Statistics Division*

Ministry of Agriculture and Forests

Royal Government of Bhutan

## IDENTIFICATION

Identification and location of the holder E F

Dzongkhag	Gewog	Chiwog	Village	Household s.no	Respondent's Name	Contact No	Enumerator's Name

**Note: \*\*Village/ Town Area:** If it's a holding in town area, please add the word 'town' after name, e.g. MONGAR TOWN.

### SECTION A: GENERAL CHARACTERISTICS

**A1. What is the main RNR activity on the holding?** (If in doubt, please refer your enumerator's manual for concepts and definitions of the following terms before making a selection.)

1-Crop production; 2- Livestock production; 3- Crop and livestock; 4- Forestry and logging; 5- Fishery and aquaculture

**A2. What type of holding is this?**

1- Household; 2- Private Ltd company; 3- Group/cooperative; 4- SOE; 5- Monastery;6- School; 7- Armed force premise; 8-Kukhor-owned;9- Others

**A2.H. Name of holder.....** If the holding in question A2 is 1-Household, please write the name of the head of household; else write the name of manager or caretaker.

**If A2 is a holding other than the household type, then else skip to section C, C1**

**A3. What is the main purpose of production? E F**

1- Only for own consumption; 2- Mainly for own consumption with some sales; 3- Mainly for sale with some own consumption; 4- Only for sale

**A4. What are other economic activities of this household? E F.** (Select all that apply. If in doubt, please refer your enumerator's manual for concepts and definitions of the following terms before making a selection.)

	Tick Below
Forestry and logging	
Non-wood forest products collection	
Fishing and aquaculture	
Processing of agricultural products (Agro processing)	
Handicrafts	
Wholesale and retail trade	

Hotels and restaurants	
Agro-tourism (including homestay)	
Livestock production	
Crop production	
Other	

A4\_OTHER. If other, please specify.....

A5. What percentage of the total household income comes from RNR production? (Only for household type holdings)

1- 0% - 25%; 2- 26% - 50%; 3- 51% - 75%; 4- 76% - 100%

### SECTION B: HOUSEHOLD MEMBERS DEMOGRAPHY

Details of household members who are usually resident in the household, sharing meals together. Please start with the household head. This information will help understand the labour force situation in the farming sector. (Only for household type holdings)

B1. Name (Please type the name of the person, starting with the respondent.)	B2. What is the relation of (name) to household head?	B3. What is the sex of (name)? (Code) (1=Female; 2=Male)	B4. What is the age (in completed years) of (name)? Skip to next member if age<15	B5. What is the marital status of (name)? Only for ages 15 and above	B6. What is the highest education attained by (name)? Only for ages 15 and above	B7. What is the main occupation of (name)? Only for ages 15 and above

**Relation to Head:** 1-Head; 2-Spouse; 3- Father/Mother; 4-Brother/Sister; 5-Son/Daughter; 6-Neice/Nephew; 7-GrandFather/ Grand Mother; 8- Grand Son/Grand Daughter; 9-Son-in-law/Daughter-in-law 10. Father-in-law/Mother-in-law 11. Brother-in-law/Sister-in-law 12. Uncle/Aunt 13. Step father/Step mother 14. Adopted/Foster/Stepchild 15. Other Family Relatives 16. Live in Servant

**Marital Status:** 1-Never Married; 2. Living Together; 3. Married; 4. Divorced; 5. Separated; 6. Widow/Widower

**Education:** 00-PP; 01-Grade 1; 02-Grade 2; 03-Grade 3; 04-Grade 4; 05-Grade 5; 06-Grade 6; 07-Grade 7; 08-Grade 8; 09-Grade 9; 10-Grade 10; 11-Grade 11; 12-Grade 12; 13-Bachelor's degree; 14-Master's; 15- Ph.D/Doctorate; 16- Diploma; 17- VTI/TTI/RTI Certificate; 18-BLC(Zherim); 19- PLC (Khakong); 20- ECCD/Daycare; 21- No Schooling; 22- Other

### SECTION C: HOLDING AREA, LANDUSE AND IRRIGATION

**C1.** Does your holding have land, either owned or leased-in from others, in this Gewog where you reside? Yes/No

**C2.** If yes, please select the land types - by legal definition, and not to be confused with actual land use. (The below categories are land types by legal definition, and not to be confused with actual landuse. For e.g. Ngulthodumra does not necessarily mean land having fruit trees, but simply how a land is registered in the thram.)

	C3. Yes/ No	C4. TOTAL AREA owned	C5. AREA leased-in	C6. Leased from?	C7. AREA leased-out	C8. AREA left fallow	C9. Reason fallow	C10. Op land (Total owned+ LI-LO-Fa)	C_FB. Farm building, farm yards	C11. Permanent crops	C12. Temporary meadows & pasture	C13. Permanent meadows & Pasture	C14. Forest-wooded
Chhuzhing													
Kamzhing													
Khimsa													
Ngulthodumra													

**Codes for fallow reason:** 1- As part of crop rotation practice; 2- Want to convert to other land type; 3- Irrigation problems; 4- Wildlife damage; 5- Labor shortage; 6- Low soil fertility; 7- Too far from home; 8- Other reasons

Note to follow for all Land holdings:

**\*\* TOTAL AREA owned:** Area should be reported as per actual physical area on the ground, which can be more (or sometimes even less) than is registered in thram.

**\*\* AREA leased-out:** Please note area leased out cannot exceed area owned. If no land is leased out, please write 0.

**\*\* AREA left fallow:** Please note area left fallow cannot exceed area owned. If no land is left fallow, please write 0.

**\*\* Op land (Total owned+ LI-LO-Fa):** Operational area = Total area of own land - area leased out from own land - area left fallow from own land + area leased-in. If the operational area figure seems unreasonable, please go back and recheck. Otherwise move on to next question

**\*\* Farm building, farm yards:** If the holder's house, including the yard around it, is also on this land, it should be included here as part of the farm buildings, otherwise if it is somewhere separately from the holding, exclude.

**\*\* Permanent crops:** Fruit trees planted here and there in scattered manner, or on land predominantly used for temporary crops, should not be considered as land under permanent crop. If none, write 0.

**\*\* Temporary meadows & pasture:** Temporary meadows and pastures are those which are less than 5 years old after establishment. If none, write 0.

**\*\* Permanent meadows & Pasture:** Permanent meadows and pastures are those which are more than 5 years old after establishment. If none, write 0.

**\*\* Forest-wooded:** Trees found here and there in scattered manner on the holding should not be considered as forests/woods. If none, write 0. Also ensure that the farmer is not referring to fallow land

overgrown with trees which he may have already mentioned before and was subtracted from own land to arrive at operational land, in which case it will be double counting.

**C15.** Does your holding have land, either owned or leased-in from others, in another Gewog? Yes- 1| No- 0 If No, skip to **RES\_THRAM\_YN**

**C16.** If yes, which dzongkhag? .....

**C17.** Which Gewog? .....

**C18.** What type of land do you operate there? Tick the ones which apply: Chuzhing/ Kamzhing/ Khimsa/ Ngulthodumra

	C19. Yes/ No	C20. TOTAL AREA owned	C21. AREA leased-in	C22. Leased from?	C23. AREA leased-out	C24. AREA left fallow	C25. Reason fallow	C26. Op land (Total owned+ LI-LO-Fa)	C_FB_2. Farm building, farm yards	C27. Permanent crops	C28. Temporary meadows & pasture	C29. Permanent meadows & Pasture	C30. Forest- wooded
Chhuzhing													
Kamzhing													
Khimsa													
Ngulthodumra													

**C31.** Does your holding have land, either owned or leased-in from others, in yet another Gewog? Yes- 1| No- 0 If No, skip to **RES\_THRAM\_YN**

**C32.** If yes, which dzongkhag? .....

**C33.** Which Gewog? .....

**C34.** What type of land do you operate? Tick the ones which apply: Chuzhing/ Kamzhing/ Khimsa/ Ngulthodumra

	C35. Yes/ No	C36. TOTAL AREA owned	C37. AREA leased-in	C38. Leased from?	C39. AREA leased-out	C40. AREA left fallow	C41. Reason fallow	C42. Op land (Total owned+ LI-LO-Fa)	C_FB_3. Farm building, farm yards	C43. Permanent crops	C44. Temporary meadows & pasture	C45. Permanent meadows & Pasture	C46. Forest- wooded
Chhuzhing													
Kamzhing													
Khimsa													
Ngulthodumra													

## LAND OWNERSHIP & GENDER

If the total land holding from all the locations is greater than 0 i.e. sum of C4+C20+C36>0:

**Asked To Respondent**

**RES\_THRAM\_YN:** Is your name (respondent) listed as an owner on one or more Thrams? 1- Yes| 0- No| 2- Don't know

**RES\_THRAM\_TYPW:** If yes, what type of Thram is it? 1-Individual ownership 2-Joint ownership 3-Family ownership; 3-Family ownership 4-More than one of the above

**RES\_THRAM\_FAM:** If no, are you a family member for a Thram for a family ownership? 1- Yes| 0- No

**Asked About randomly selected household member (RSHM) other than respondent:**

**RAND\_THRAM\_YN:** Is X (RSHM) listed as an owner on one or more Thram? 1- Yes| 0- No (Please ask the following question to the randomly selected member of the household. If not present, the respondent may answer on his/her behalf.)

**RAND\_THRAM\_TYPW:** If yes, what type of Thram is it? 1-Individual ownership 2-Joint ownership 3-Family ownership; 3-Family ownership 4-More than one of the above

**RAND\_THRAM\_FAM:** If no, is X a family member for a Thram with family ownership? 1- Yes| 0- No

**RAND\_PRESENT:** Was X present when C\*\*2 questions were asked? 1- Yes| 0- No

**C47.** Did this holding irrigate any land in 2018? Yes-1; No-0 If Yes go to **C48**, If No skip to **D1**

**C48.** How many acres (in acres) were irrigated? .....

**C49.** What was the main method of irrigation? (If in doubt, please refer your enumerator's manual for concepts and definitions of the following terms before making a selection.)

1- Surface Irrigation 2- Sprinkler irrigation; 3 Localized Irrigation (Drip irrigation, micro irrigation)

**C50.** Select the main source of irrigation water. (If in doubt, please refer your enumerator's manual for concepts and definitions of the following terms before making a selection.)

1. Surface water 2. Ground water 3. Mixed Surface water and Ground water 4. Municipal water supply

**SECTION D. CROPS**

**D1.** Did the holding grow any CEREALS in 2018? Yes- 1| No- 0 (if No, skip to D2)

(No need to select a crop if the area grown was negligible, e.g. 1 decimal or less.)

<b>D1_01. What cereals did you have in 2018?</b>	<b>D1_03. How many times grown in 2018?</b>	<b>D1_04. Area harvested (Acres)</b>	<b>D1_05. Production (Kg)</b>	<b>D1_06REV. Which of the following inputs were used? Please select all that apply. 1- chemical fertilizer; 2- manure/ compost; 3- chemical pesticide; 4- non-chemical pesticide</b>
Paddy (Irrigated)				
Paddy (Upland)				
Maize				
Wheat				
Barley				
Millet				

Sweet Buckwheat				
Bitter Buckwheat				
Amaranthus				
Quinoa				

Note for all the crops:

\*\* How many times grown in 2018? (This refers to whether the farm did double or triple cropping of this crop in 2018.)

\*\* Area harvested (Acres) (If done double or triple cropping, then area from each harvest should be summed up to give total.)

\*\* Production (Kg) (If harvested twice or thrice, then production from each harvest should be summed up to give total)

**D2.** Did the holding grow any OILDSEEDS/LEGUMES in 2018? Yes- 1| No- 0 (if no, skip to D3)

(No need to select a crop if the area grown was negligible, e.g. 1 decimal or less.)

<b>D2_01. What oilseeds and leguminous crops did you grow in 2018?</b>	<b>D2_03. How many times grown in 2018?</b>	<b>D2_04. Area harvested (Acres)</b>	<b>D2_05. Production (Kg)</b>	<b>D2_06REV. Which of the following inputs were used? Please select all that apply. 1- chemical fertilizer; 2- manure/ compost; 3- chemical pesticide; 4- non-chemical pesticide</b>
Mustard				
Sunflower				
Soya bean				
Sesame				
Groundnut				
Beans				
Broad beans				
Chickpeas				
Cowpeas				
Lentil				
Lupins				
Peas				

**D3.** Did the holding grow any VEGETABLES in 2018? Yes- 1| No- 0 ((if No, skip to D4)

(No need to select a crop if the area grown was negligible, e.g. 1 decimal or less.)

<b>D3_01. What vegetable crops did you grow in 2018?</b>	<b>D3_03. How many times grown in 2018?</b>	<b>D3_04. Area harvested (Acres)</b>	<b>D3_05. Production (Kg)</b>	<b>D3_06REV. Which of the following inputs were used? Please select all that apply. 1- chemical fertilizer; 2- manure/ compost; 3- chemical pesticide; 4- non-chemical pesticide</b>
Asparagus				
Broccoli				
Cabbages				
Cauliflower				
Chili				
Spinaches and sags				
Onion (inc. shallots)				
Ginger				
Turmeric				
Garlic				
Coriander				
Eggplant/ aubergine/ brinjal				
Okra/ ladies' finger				
Tomato				
Cucumber				
Pumpkins, squash and gourds				
Carrot				
Radish				
Turnip				
Watermelon				

**D4.** Did the holding grow any MUSHROOMS in 2018? Yes- 1| No- 0 If No, skip to **D5**

**D4\_01.** If yes, what type of mushroom?

A-Oyster; B-Shitake; C-Button; D-Others

**D4\_02.** How much quantity (in KG) of mushroom was produced in 2018?.....

**D5.** Did the holding grow any ROOTS/TUBERS in 2018? Yes- 1| No- 0 If No, skip to **D6**

(No need to select a crop if the area grown was negligible, e.g. 1 decimal or less.)

<b>D5_01. What roots/ tuber crops did you grow in 2018?</b>	<b>D5_03. How many times grown in 2018?</b>	<b>D5_04. Area harvested (Acres)</b>	<b>D5_05. Production (Kg)</b>	<b>D5_06REV. Which of the following inputs were used? Please select all that apply. 1- chemical fertilizer; 2- manure/ compost; 3- chemical pesticide; 4- non-chemical pesticide</b>
Potato				
Sweet Potato				
Cassava				
Yams				
Taro				
Yautia				
Other roots and tubers n.e.c				

**D6.** Did you have any PERMANENT CROPS (fruit crops including coffee) in 2018? Yes- 1| No- 0 If No skip to **D7**

For each permanent crop grown, ask the total number of trees and bearing trees, and production.

<b>D6_01. What permanent crops did you grow in 2018?</b>	<b>D6_03. Total tree number</b>	<b>D6_04. Of which how many are fruit bearing trees</b>	<b>D6_05. Production (Kg)</b>	<b>D6_06REV. Which of the following inputs were used? Please select all that apply. 1- chemical fertilizer; 2- manure/ compost; 3- chemical pesticide; 4- non-chemical pesticide</b>
Apple				
Pear				
Peach				

Plum				
Apricot				
Persimmon				
Date-plum (gendum)				
Walnut				
Hazelnut				
Areca nut				
Mandarin				
Lemons and limes				
Mango				
Guava				
Pomegranate				
Avocado				
Litchi				
Jackfruit				
Banana				
Tree tomato (Tamarillo)				
Dragon fruit				
Kiwi				
Papaya				
Coffee				
Tea				

...any other permanent crops, such as cardamom, pineapple and sugarcane? (No need to select a crop if the area grown was negligible, e.g. 1 decimal or less.)

	<b>D OPC1. Area under x (Acres)</b>	<b>D OPC2. Production (Kg)</b>	<b>D OPC3REV. Which of the following inputs were used? Please select all that apply. 1- chemical fertilizer; 2- manure/ compost; 3- chemical pesticide; 4- non-chemical pesticide</b>
Cardamom			
Pineapple			
Sugarcane			

**D7.** Did you have some cropped land under protective cover (e.g. plastic or glass house) on your holding in 2018? Yes- 1 | No- 0

If No skip to **E1**

(Not to be confused with structures like farm buildings, store house etc.)

**D8.** If yes, what area of your land was under protective cover? .....

## SECTION E: LIVESTOCK

**E1.** Do you have large bovine animals (e.g. cattle, buffaloes, yaks, zoms etc) **on this day**? Yes- 1 | No- 0 If No skip to **E8**

For the selected, details

E2. Tick the ones raised on this day.	E4. Total number of animals	E4_FA. Total female animals
Jersey pure breeds		
Jersey cross breeds		
Brown swiss pure breeds		
Brown swiss cross breeds		
Holstein-Fresian breeds		
Mithun pure breeds		
Jatsa-jatsams		
Yanku-yankums		
Doeb-doebums		
Doethra-doethrams		
Nublang-thrabams		
Jabas		
Buffaloes		
Yaks		
Zo-zoms		
Golengs		

**E6.** What feeding system do you practice with your cattle? (If in doubt, please refer your enumerator's manual for concepts and definitions of the following terms before making a selection.)

1. Grazing system; 2- Mixed system; 3- Industrial system

**E7.** If grazing system is practiced, what type? (If in doubt, please refer your enumerator's manual for concepts and definitions of the following terms before making a selection.)

2. Nomadic or totally pastoral; 2- Semi-nomadic, semi-pastoral or transhumant; 3- Sedentary pastoral or ranching

**E8.** Do you have any OTHER LIVESTOCK on this day? Yes- 1 | No- 0 If No skip to **E13**

For the selected ones, ask details for each.

E9. Tick the ones raised on this day.	E11. Total number of animals	E11_FA. Total female animals
Horses		
Asses		
Mules and hinnies		
Sheep		
Goats		
Local pigs		
Improved pigs		
Chickens – layers		
Chickens - broilers		
Chickens - local		
Turkeys		
Geese		
Ducks		
Guinea fowls		
Utility dogs		

**E13.** Do you have bee hives? Yes- 1| No- 0

**E14.** How many hives? ..... If No skip to **E16**

**E15.** What type of bees are they? Local/Improved

**E16.** Do you rear fish in ponds? Yes- 1| No- 0

## SECTION F: FARM MECHANISATION

**F1.** In 2018, what kind of equipment/ machinery was used on the holding? Select the ones that apply. Tick the ones that were used.

Type of Machinery & Equipment	Tick	F3. Source (Select from below) 1-Own, 2-Hired from FMCL; 3- Hired from others (Non-FMCL); 4- Hired from Government, 5-Other
Manually operated thresher		
Power thresher		
Manually operated sprayer		
Power sprayer		
Transplanter		
Tractor		
Power tiller		
Power reaper		
Brush cutter		
Combine harvester		
Rotary paddy weeder		
Potato harvester		
Sorter and graders		
Maize sheller		
Cornflake(tengma) machine		
Vegetable/ fruit drier		
Chainsaw		
Milking machine		

Power cream separator		
Water pump		
Milling machine		
Chaff cutter		

**F4.** During 2018, what was the main source of power for land tillage on this holding?

1- Animal power; 2- Machine power; 3- Manual power

**SECTION G: CREDIT** (Only for household type holdings)

**G1.** In 2018, did you avail any credit for purposes related to the operation of the holding?

Yes- 1| No- 0 If No skip to **H1**

**G2.** Select the source of credit.

Source of credit	G3. Availed from (Yes/No)
Commercial bank	
Agricultural development bank (e.g. BDBL)	
Cooperative credit society	
Money lender	
Input supplier	
Self-help group	
Family or friends	
Government	
REDCL	
NGO (e.g. Tarayana)	

## SECTION H: WORK ON THE HOLDING

**H1.** Did the holding employ a hired manager to run the holding in 2018? (Institutional type holdings may usually employ hired manager/ caretaker, so if this is the case for this holding, 'Yes' should be selected.) Yes- 1| No- 0 If No skip to **H4**

**H2.** What is the sex of the hired manager (1- Male; 2- Female)

**H3.** What is the age of the hired manager?.....

**H4.** In 2018, did you hire workers on the holding, on casual basis (as and when required)? Yes- 1| No- 0 If No skip to **HFT**

**H5.** On how many occasions did you hire casual workers in 2018? .....

**H6.** In total how many man-days were worked? ..... (To calculate total man-days, let us illustrate by an example. Suppose a holding had hired workers on 3 occasions. In the 1st occasion 5 workers came to work for 2 days, in the 2nd occasion 3 workers came and worked for 3 days and in the 3rd occasion 10 workers came to work for 1 day. Therefore total man-days is calculated as: (5x2) + (3x3) + (10x1) = 29 man-days.)

**H7.** How many different individuals were involved for the said number of man-days? ..... (For example, the 29 man-days were done by 10 different individuals, some coming once, some twice and some thrice but counted only once.)

**H8.** Of which how many were female workers?

**H9.** What was the main form of payment for casual workers?

1-Cash only; 2-Cash plus meals; 3-Farm produce; 4-Exchange of labour; 5-Other forms of in-kind payment

**HFT.** Did you employ any worker on long-term basis? (Example, a dairy farm may employ a worker on full-time basis, for a few months or all year round.)

Yes- 1| No- 0 If No skip to **MAINACT**

**H\_FT\_NUM** How many workers were employed on long-term basis? .....

**H\_FT\_FEM** Of which, how many were females? .....

### WORK ON THE HOLDING BY FAMILY WORKERS (Only for household type holdings)

<b>MAINACT.</b> Is the work on the holding the main activity of [name]? Yes- 1  No- 0 If No skip to <b>H10</b> Copy household member names from the demography table, only for those aged 15 and over.	<b>HH_WORKTIME.</b> For how long did [name] work on this holding in 2018? 1- 0 - 10 Man-Days; 2- 11 - 20 Man-Days; 3- 21 – 31 Man-Days; 4- 1 - 3 months; 5- 3 – 6 months; 6- 7 or more months

**H10:** Did you face any constraints/situation in 2018 that affected your RNR productions or assets? (Only for household type holdings)

Yes- 1| No- 0 If No skip to **H12**

**H11.** If Yes, tick 3 most important constraints from below faced by your household/holding in 2018. (Only for household type holdings)

	<b>Tick</b>
Irrigation problem	
Unproductive land	
Labour shortage	
High labour wages	
Crop damage by wild animals	
Crop damage by insects /diseases	
Drought	
Excessive rain	
Hailstorm / wind	
Landslides / soil erosion	
Livestock depredation by wild animals	
Livestock diseases	
Lack of feed and fodder supply	
Shortage of land	
Limited access to market	
Difficulty in getting loans	
Difficulty in getting farm machinery	

**H12.** Was your household able to meet all food requirement for all of 2018? (Only for household) Yes- 1| No- 0

## SECTION I: FORESTRY

**J1.** Did your household collect Wood or Non Wood Forest Products in 2018 for consumptions or sales? (Only for household type holdings)

Yes- 1| No- 0 If No skip to **J1**

Tick the NWFP(s) collected in 2018 (Only for household type holdings)

	Tick		Tick
Wood for Dhapa and other cups		Cane (for making bang chu, baskets, ropes)	
Firewood		Cane shoot (patsa for curry)	
Mushroom (Wild)		Bamboo shoots (for curry)	
Wild Orchid flowers		Fern shoots (Naakey)	
Illicium fruits / Star anis		Damru	
Walnut (wild)		Satuwa ( <i>Paris polliphyla</i> )	
Hazel nut / Chest nut		Paan/betel leaves	
Rubiaccordifolia (Soe / Laneru / Majeto) Dyes		Incense leaves/ plant (sang-zey)	
Chirata		Oil seeds/nuts (e.g pangtse makhu)	
Pipla		Daphne bark	
Resin		Shilajit	
Lemon grass		Cordyceps	

### **J1. GPS READING OF THE HOLDING**

To get GPS make sure the location function of your device is turned on. GPS location of the holdings will enable MoAF to understand the spatial distribution of the holdings across the country for better landuse planning. If you do not intend to capture GPS, you must note the reason (click on Note icon and type the reason) before selecting 'No need'.

If GPS coordinates could not be acquired upon clicking 'Get GPS' and waiting for 60 seconds, just type 0 (zero) in the LATITUDE AND LONGITUDE items to end the questionnaire.

1-Get GPS; 0-No need (coordinates will be captured in LATITUDE and LONGITUDE)

**THE END**