

# Biogas Research Team

## Household questionnaire – Field survey 2017

### 1. Basic and Regional Information:

1.1 Name \_\_\_\_\_

1.2 Region \_\_\_\_\_

1.3 Gender:  Male  Female

1.4 Age: \_\_\_\_\_ years

1.5 Highest achieved education of household head:  Primary school  High school  University

Without formal education

1.6 What is main household occupation? \_\_\_\_\_

1.7 Is your household involved in any off-farm activities? \_\_\_\_\_

1.8 What is the average income of your household? \_\_\_\_\_ VND / month

1.9 How many members live in your household? \_\_\_\_\_

1.10 How many members of your household help to manage the BGP? \_\_\_\_\_

1.11 Who provided you training regarding BGP?  AFFEC  NGO, specify \_\_\_\_\_

Private company  Different, specify \_\_\_\_\_

1.12 How much time (days) your training took? \_\_\_\_\_

1.13 Have you received a certificate from your training?  No  Yes, specify \_\_\_\_\_

### 2. Biogas plant

2.1 Please, describe (in detail) the process of requirements how did you get a BGP (including parameters, requirements (animals), administration procedure incl. approving):

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2.2 Please, describe (in detail) the process of BGP construction (including preparation, construction):

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2.3 What is the volume of your biogas plant? \_\_\_\_\_ m<sup>3</sup>

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2.4 Is there a H<sub>2</sub>S removal filter installed in your BGP?

2.5 What is the type of BGP? KT1 KT2 other \_\_\_\_\_

2.6 When was your biogas plant built? \_\_\_\_\_ year

2.7 What is the expected lifespan of the biogas plant? \_\_\_\_\_ years

2.8 What are you going to do with the biogas plant at the end of its life?

\_\_\_\_\_

2.9 Who is responsible for the biogas plant when it reaches the end of its life?

Owners/households  Government institutions (AFFEC)  Other, specify \_\_\_\_\_

### **3. Energy & other energy sources**

3.1 Does the production of your biogas plant meet your energy demand?

No Yes, just enough. Yes, it produces more.

3.2 Do you use some other energy sources? Which? (i.e fuelwood, LPG)

\_\_\_\_\_ what do you use them for \_\_\_\_\_

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\_\_\_\_\_ what do you use them for \_\_\_\_\_

3.3 What do you use the electricity for?

1) \_\_\_\_\_

2) \_\_\_\_\_

3) \_\_\_\_\_

3.5 How much is the average electricity bill of your household for one month? \_\_\_\_\_ VND / month

3.6 How much time did you spend before using the BGP by gathering fuelwood? \_\_\_\_\_ h / week

3.7 How much time do you spend nowadays by gathering fuelwood? \_\_\_\_\_ h / week

3.8 Is your toilet connected to the biogas plant?  Yes  No

If not, why \_\_\_\_\_

If not, what is happening with toilet waste \_\_\_\_\_

3.9 If the manure or household waste is discharged, where is it usually located?

\_\_\_\_\_

3.10 How much money did you spend for fuels for cooking before using the BGP per a month?  
\_\_\_\_\_ VND / month

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**3.11** How much money do you spend nowadays for fuels? \_\_\_\_\_ VND / month

**3.12** Can you compare the environmental situation in your area before obtaining BGP and now?

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### **4. Problems with biogas technology**

**4.1** In the table below are some common problems. If you have experienced this problem, please write how many times (a year) it occurred. Please write, what would you do in a case of this problem. Would you manage and what would be the solution? (a) Would you ask the facilitator for an advice? (b)

<b>Problem</b>	<b>How many times (a year)?</b>	<b>(a) Manage by yourself (b) ask for advice?</b>	<b>What is the solution?</b>
Insufficient biogas production			
Gas leakage (tank, holder, inlet, outlet)			
Insufficient input (not enough animals)			
Problems with composition of input (pH and C/N ratio)			
Problems with gas pressure (unstable, low)			

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Water condensate (gas supply system)			
Process breakdown (stopped working)			
Malfunction of a biogas cooker			
Malfunction of biogas lamp			
Health hazard (i.e. during cleaning)			
Unpleasant odour (around biogas plants)			
Bad smell of biogas (using the gas cooker)			
Gas combustion (poor flame, too much biogas in mix)			
Low quality and amount of digestate			

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Other problems:			
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### **5. Other comments / information:**

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