**BIOGAS ASSESSMENT PROJECT**

**Site ID: 41**

**Date: September 28, 2022**

**Interviewer**: Where did the digester originate from?

**Interviewee**: The digester came with the Agriculture Extension Officer from Nsanama EPA and his assistant.

**Interviewer**: Who designed it?

**Interviewee**: I can say the government through the agriculture office.

**Interviewer**: Who funded it?

**Interviewee**: On that, I do not know because they did not explain to us where the funds came from.

**Interviewer**: Who built it?

**Interviewee**: The digester was never fully installed; they just placed the bag in the hole and connected two white pipes. But, before that, I was advised to dig a hole, and then they came and said the hole was not as it was supposed to be. So, I made the adjustments to the hole while the Agriculture Extension Officer and his assistant was there. After that, I was advised to make feedstock for the digester, which I did. I do not know how much feedstock, I made, but they said it was not enough. They went back, and then the rains started and filled the digester.

**Interviewer**: When was this?

**Interviewee**: I think it has been 6 years now.

**Interviewer**: I mean, what month was it?

**Interviewee**: It was mid December, I think. Therefore, I can say it came at the wrong time because it was the rainy season – It came at a wrong time!

**Interviewer**: How many people built?

**Interviewee**: I dug the hole alone the first time, and the second time dug the hole while the Agriculture Extension Officer and his assistant was around.

**Interviewer**: How many people from the installation company came?

**Interviewee**: It was the Agriculture Extension Officer and his assistant only.

**Interviewer**: So, the three of you built it?

**Interviewee**: Yeah.

**Interviewer**: Apart from digging, what was your other role?

**Interviewee**: I dug the hole and made feedstock. There were not many activities as the digester was in its infancy stage.

**Interviewer**: How much feedstock did you prepare that time?

**Interviewee**: My son, I have forgotten, it has been long.

**Interviewer**: (laughs) yeah, it has been wrong.

**Interviewee**: And it is even hard to remember when you did use the thing.

**Interviewer**: Yeah, I see. We have so many people and households in this village. How were selected as a beneficiary?

**Interviewee**: I think they believed that when they installed the digester here, it would work and stay for a long time. Moreover, they saw that I am a hard worker.

**Interviewer**: Are you a hard worker?

**Interviewee**: (Laughs) Yes, I am.

**Interviewer**: Did you know about biogas before?

**Interviewee**: I did not know anything about biogas. I become aware of biogas when I was called at TA court.

**Interviewer**: Who was called there? Was it just chiefs or ordinary people too?

**Interviewee**: It was not just chiefs; ordinary people were there as well. The beneficiary were solely chosen by the people and Village Development Committees (VDCs) based on reputation of hard work and activeness. So, I was chosen and another man from Muheliwa Village was chosen.

**Interviewer**: So people did not choose you because you are a chief?

**Interviewee**: (Laughs) No, everybody knows I am a hard-working person here.

**Interviewer**: Oh nice, even though you were chosen by the people you had the right to say no, why did you accept to build the digester?

**Interviewee**: You cannot just keep cooking with maize stalks; it is just not on (laughs). That is a hard life. So, I was very happy, and I thought it was blessing too. Then, bad luck came and I did not enjoy the blessing! And, I do not like the way extension workers work these days, they seem to me so incompetent. I mean, they should have brought this in a summer where it could have worked. I am sure it would not have reached a state of being eaten by rats. Also, the extension workers were supposed to be here full time in the field. They should have been advising us on any matter regarding the digester and motivating us as well, and that could have been like a training too.

**Interviewer**: Okay, what were your expectations?

**Interviewee**: I thought I was going to be free and healthier too. When the digester came, I was happy because I knew I was going to stop searching for firewood or maize stalks, so my body energy would not have been wasted on finding firewood. It is really tiresome to search for firewood.

**Interviewer**: What did the installers tell you to expect it from this?

**Interviewee**: They just told me that a digester is used for cooking. They did not tell me anything apart from that. For example, they did not tell me how it works etc.

**Interviewer**: Did they tell you that you could use it for lighting?

**Interviewee**: No, they did not.

**Interviewer**: Did they tell you that you could use its byproduct as fertilizer?

**Interviewee**: No, they did not say anything like that. They just said that we could use it for cooking.

**Interviewer**: Okay, what kind of training did you receive?

**Interviewee**: No, I did not receive training.

**Interviewer**: Not even on the day they came?

**Interviewee**: No.

**Interviewer**: Then, how would you have managed to switch it on?

**Interviewee**: After being selected as a beneficiary at the T/A courtyard, I received a phone call from Agriculture Extension Worker to go to Nsanama EPA to collect the equipment because they could not manage to bring it here because it was heavy. When I asked him when I should go there to collect the material, he told me to go right away. I told him I could not manage as I was in the field. Then they told me they would see what they could do. Moments later, he called me that they were coming to bring the equipment. Then they came with his equipment on a motorbike, and the way I saw it I would not have managed to carry it on my bicycle (laughs), no way. They tried to wrap it, but it was a lot, I could not have managed (laughs).

**Interviewer**: And it is also far.

**Interviewee**: Yeah, I could not have managed. And, I even asked to them if they thought I could have managed to carry it, because it was heavy equipment, and they even did not manage to bring everything too, for example, the pipes.

**Interviewer**: What else did they bring apart from the digester bag that time?

**Interviewee**: (Laughs) it was heavy. They came two times that day. First, they came around 8 AM with the digester bag, and they went back to bring the pipes. So when they came the first time they told me that the bag would not fit into the hole, and they asked me to make it bigger.

**Interviewer**: So after that, you made feedstock and placed it in the digester bag, then the rains started and filled the bag. So when they came to assemble the pipes and stove they found the bag filled with water…

**Interviewee**: They said the water was too much, so it could not work. Then, they told us to wait for the bag to shrink, and that they would come at some point. From that time, they did not come after the rainy season or after summer, or after the next rainy season. They came after 3 years or so, but did not find me as I was at a funeral that time. So, I was just told that they came to assess the digester and found that the digester bag eaten by rats (laughs). They said they would come back, but since then they have never returned.

**Interviewer**: So you did not reach a level where you could receive training?

**Interviewee**: Yeah, we never receive the training of any sort. And, we do not even know that it produce fire!

**Interviewer**: How did you meet your energy needs that time?

**Interviewee**: We use firewood on energy efficient stove made of clay.

**Interviewer**: Where did you get the manure? Was it all from you animal house? Or, you asked some from other people too?

**Interviewee**: I got it all from my cow house.

**Interviewer**: How many bags did you use?

**Interviewee**: It was two bags, and after we started feeding it, that is when the rains started.

**Interviewer**: Where did you get the water?

**Interviewee**: Water is a problem here. We get water from that river there!

**Interviewer**: That is like 600 or 700 meters. You don’t have a borehole around?

**Interviewee**: We have but it’s too far from here.

**Interviewer**: So where do you get drink water?

**Interviewee**: We also get it from there; where else can we get water?

**Interviewer**: I see. How did you manage your feedstock that time?

**Interviewee**: I use it in the farms. But, first, I heap it there to break down.

**Interviewer**: Some say animal manure does not work as fertilizer, what is your take?

**Interviewee**: That is a lie. When you use animal manure as fertilizer, you get strong maize. What I usually do is, I dig two small holes one either side of the maize, and put manure in the holes and cover. And, the maize I get there is huge. So, the trick is not to put it close to the maize as with inorganic fertilizer, because if you do that the maize wilts as the nutrients are excess.

**Interviewer**: So, it is all about the application of the manure…do you have agriculture extension workers here?

**Interviewee**: No.

**Interviewer**: So how did you figure that out?

**Interviewee**: We just use God’s given wisdom. So we just think of how best we can use the manure and it works. At some point, I was applying manure directly to the maize and it was wilting. And, it is not easy use animal manure a fertilizer because it also attracts pests. It comes from the manure. So, when you use manure you know you will struggle with pests. (Laughs)

**Interviewer**: How did you deal with the pests?

**Interviewee**: When we have money, we buy pesticides. But, if we do not have, we just let it be.

**Interviewer**: My next question was to ask how it worked after commissioning, but since it did not work at all, we will move on. What were the operation requirements?

**Interviewee**: They just said it needs two things, animal manure and water.

**Interviewer**: On the day you fed it to start it up, how did you prepare the feedstock? Did you have stir, mixer, or something?

**Interviewee**: They did not talk about mixing. They only specified the quantity of manure and water to feed it with. Then, they told us that after feeding it, they would come to assemble it. They did tell us to mix the feedstock. I doubt their expertise, I wonder if he had gone for training themselves (laughs). They did not tell us to mix feedstock.

**Interviewer**: Did they tell you how often you were supposed to feed it and in quantities?

**Interviewee**: They did not talk about feeding.

**Interviewer**: What were the maintenance requirements?

**Interviewee**: Maybe if they had commissioned it, they would have told us things regarding maintenance. So, maybe if it had worked, then they would have told us about that. And the next set of people who came found it completely dead after been eaten by rats, so they could not have talked about maintenance too. But, they left their numbers and told my son that it was beyond repair. So, I just got the bag out of the hole because it was harboring a lot of rats – it became a house of rats (laughs)

**Interviewer**: What did you do with the bag after you got it out? I have seen people using it for different purposes and all, what did you use it for?

**Interviewee**: I should not lie to you because lying is a sin. After I got the bag out, I cut it and took it to the mosque, as there were no mats to use for praying. Maybe, this way it could turn out to be a blessing to the donors; I did not use it as roof.

**Interviewer**: Let us talk about challenges, what challenges were there?

**Interviewee**: The problem was that the installers did not come as they promised so we did not see the benefits of biogas. That’s was the only problem.

**Interviewer**: Didn’t the installers tell you that it does not work effectively in the rainy season or when there is no sun?

**Interviewee**: Then they would not have come in the rainy season – they did not tell me that!

**Interviewer**: Have you ever come across the Agriculture Extension Officer or his assistant?

**Interviewee**: No, and I do not think he is still at Nsanama.

**Interviewer**: Did you have their numbers?

**Interviewee**: Yeah, I had his number even before the biogas thing started..

**Interviewer**: Did you call him?

**Interviewee**: No.

**Interviewer**: Why did you not try to call him?

**Interviewee**: I could not have called him when I saw that he had failed. There was no point of calling him. And, I knew that he would not come when he said he would come again at some point. I knew that was a mature and honorable way of saying we have failed, bye.

**Interviewer**: Okay, we are in September 2022. Let us suppose The Agriculture Extension Officer or his assistant call you today to ask about the current state of your digester, what would you say? I mean, how would you describe the current state of your digester today?

**Interviewee**: I would tell him you know how you left; how many years has it been; and what do you expect? It is as you left it – it`s dead.

**Interviewer**: How did it reach this stage? And in your opinion, what caused it to fail?

**Interviewee**: It is simple; they did not come after they installed it to make proper adjustments.

**Interviewer**: Okay, why do you think they did not come?

**Interviewee**: Like I said, I doubted their expertise. So, maybe they did not know how to fix it.

**Interviewer**: Okay, how do you meet your energy needs now?

**Interviewee**: It is the same as in the past.

**Interviewer**: What about charcoal?

**Interviewee**: No, we do not have trees for charcoal production. Also, we do not have the money to buy charcoal.

**Interviewer**: Are you still using manure as fertilizer your farm?

**Interviewee**: Yeah.

**Interviewer**: I am sure when you cut the digester bag you found manure, what did you do with the manure?

**Interviewee**: It was completely eaten and some dead rats were also in there because of the heat (laughs)

**Interviewer**: Did you use it as fertilizer?

**Interviewee**: No, it was not in a state where it could have been used as fertilizer. It was full of dead rats. So, we just threw it away.

**Interviewer**: We are going towards the end of the interview. Okay, how much did the reactor cost?

**Interviewee**: They did not reveal that to us.

**Interviewer**: Okay, did you contribute anything in kind?

**Interviewee**: No.

**Interviewer**: Your buckets?

**Interviewee**: No.

**Interviewer**: Apart from digging and feeding it, what other activity did you do?

**Interviewee**: Nothing.

**Interviewer**: You did not line the hole with a brick wall?

**Interviewee**: No.

**Interviewer**: Did they talk anything regarding lining the wall?

**Interviewee**: No. They just told us to feed it, and that when we feed it the bag would inflate.

**Interviewer**: What special items have to be imported from another country?

**Interviewee**: They did not reveal that to us too.

**Interviewer**: We are the remaining with three questions, what is your opinion of biogas?

**Interviewee**: We still want it so that we can know its use. We did not see how it works, and how long it works.

**Interviewer**: Okay, so you still want it?

**Interviewee**: Yeah

**Interviewer**: Considering all that happened, do you think biogas has a future in Malawi?

**Interviewee**: If we had used it, we would have known. But, it looks like it can help because it is easy to use and ignite. I do not like blowing air on fire to boost the fire. It is tedious. Women are struggling!

**Interviewer**: In your opinion, why were the installers not serious with the digesters?

**Interviewee**: I do not know if it was jealousy or something. How could they just abandon it here when they knew that the donors had spent a lot of money on the digesters? They were supposed to follow it up and do anything to make it work, so that the donors could get their blessings. If you give something to someone to use, you gets blessings especially if the person uses the thing, because God is happy. So, I do not know if they [installers] are tired with their work, because if they are it is better that they should just quit.

**Interviewer**: (laughs) If you could have designed your own waste or energy intervention, what would you have chosen instead?

**Interviewee**: Eh, that is a difficult one. Of course, we have efficient stoves here, but I still think we need biogas because it is similar to electric stoves; it is easy to use, it helps save breath and it also keeps the eyes safe from smoke.

**Interviewer**: That was my last question, in closing do you have anything to say?

**Interviewee**: Yes, I just want to say I have the desire to own a digester again because the last time I did not see its benefits. So, I hope that one day I can see its benefits.

**Interviewer**: A digester needs to be fed, for example, you with one bag of manure every day can you manage?

**Interviewee**: If it keeps producing fire, then that is not a problem.

**Interviewer**: Thanks for the interview.

**Interviewee**: Welcome!