**BIOGAS ASSESSMENT PROJECT**

**Site ID: 45**

**Date September 29, 2022**

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

**Interviewee:** It came with people from University; I don’t know the name of the University thought. The people told me that they were going to put a stove in the kitchen, and that I had to dig a hole for the digester. They also told me that the digester would use animal manure, for example, goat, pig and cow manure. They further explained that I would be able to get energy for cooking as well as fertilizer from the digester.

**Interviewer:** The installers mentioned that they came from a university, but you have forgotten the university. Was it Poly, Mzuzu or Chanco?

**Interviewee**: I didn’t pay much attention to where exactly they were coming from, but I was more focused on the technology they were bringing here. So, just like many villagers would do, I simply accepted the technology without asking questions.

**Interviewer**: Who funded it?

**Interviewee**: They didn’t explain that. They just told me that they were going to install a technology that produces gas for cooking. Then they told me that they would line the hole for the digester bag and another hole with a brick wall, and that they had people who would do that. After that, they also mentioned that I would be collecting manure from the other hole, which I could use as fertilizer. When I heard about the fertilizer, I called three other chiefs to come and join me in digging the hole, so that they could be getting manure from the digester as well. After we dug the hole, we waited for the installers to come but they never came. They only gave me the things you took pictures of [a digester bag and one PCV Pipes (110mm)] on the day they asked us to dig the hole.

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

**Interviewee**: I think it was four or three people. After this, years went by and five other people visited the digester too.

**Interviewer**: What was the purpose of their visit?

**Interviewee**: They told me that their records showed that I was a beneficiary of a digester, so they wanted to follow up on the digesters. Then, I told them that certain people came and left a digester bag and one white pipe. But, they didn’t even place the digester bag in the digester hole. I took them to the hole to see it and they took pictures. Then, I told them that I felt like I was robbed and things didn’t make sense to me. I also asked if the same had happened to other beneficiaries. Then, they laughed and said that’s why they had come to find out what happened to the digesters. Then, I said okay and I asked if they would bring the remaining parts in the future. Then, they told me that they would come back, but before leaving, they stood on that mango tree and asked me to give them their privacy. They stood there for 10 – 15 minutes, and then they told me that they were going, and would come back at some point. Since, then they have never returned and I have never heard of biogas until I got your call the other time, and talked and provided you directions and all that.

**Interviewer**: What do you mean when you say you were robbed?

**Interviewee**: They took advantage of me and deprived me of what I was supposed to get. They were cunning that I shouldn’t get the digester. Let’s say they did want me to get the digester, so they stripped and deprived me of the digester.

**Interviewer**: Then, why did they give you some other things if they didn’t want you to get the digester?

**Interviewee**: Yeah, sometimes you may think you are given meat when it’s just a bone! Then, you release later that it’s a bone and not meat!

**Interviewer**: (laughs) Oh

**Interviewee**: (laughs) I thought I had meat and I started chewing it, but then I bite it and found out that it was hard bone.

**Interviewer**: (laughs) It’s common to see chiefs mobilizing community people to help them when there is a project, why did you call other chiefs, not just community people?

**Interviewee**: It’s not as it was in the past where chiefs would just choose people to do certain things for them. Of course, some chiefs to do that, but I’m not that type of person. So, I called the chiefs because I wanted them to inform their subjects that when the digesters become fully functional to bringing manure, so that they could also be getting fertilizer out of it too.

**Interviewer**: So, you wanted to make it a community thing, nice. What was your role?

**Interviewee**: I took the role of a “treasurer”. I accepted to take care of digester so that other community members would gain processed fertilizer from it by providing raw animal manure … So, I can say I was a “treasurer” because I was a custodian of the digester!

**Interviewer**: Okay, that’s one part. The other thing you mentioned that you took part in the dig of the hole together with other three chiefs. How big was the whole and how long did it take you to dig it?

**Interviewee**: The hole was 3 meter deep and 1.5 meters wide, if I’m not mistaken, and it took us 2 or 3 days. So, after we dug it we waited for them to come and advise us, if the hole was sufficient or not.

**Interviewer**: How did you get the bag and that white pipe?

**Interviewee**: The digester bag and the white pipe came before we dug the hole. On that day, they advised us how to dig the hole, and then they gave us the bag and the pipe. Then, they told us that the pipes were not sufficient, so they would come back with pipes and bags of cement to line up the hole with brick wall. So, that day I kept the bag and pipe waiting for them to come back at some point.

**Interviewer**: Okay, I get it.

**Interviewee**: And that’s when the next people came to follow up the digesters. So, you told the same story.

**Interviewer**: So the bag was not installed in the hole? You did put the bag in the hole?

**Interviewee**: Yeah, we don’t know how to do that, so didn’t do anything afterwards. And the time they were leaving, they told us that they would bring a builder to line the wall and place the bag, and then assemble the whole digester.

**Interviewer**: (laughs) and they didn’t come?

**Interviewee**: (laughs) yeah, they didn’t come.

**Interviewer**: Did you follow up?

**Interviewee**: Where would we have gone?

**Interviewer**: At the T/A (Traditional Authority)

**Interviewee**: We were 3 or 10 beneficiaries, if I heard that one had followed up, I would have followed up too.

**Interviewer**: Oh, I see. In this village, that you have many people and a lot of households, how were you chosen as a beneficiary?

**Interviewee**: The digester was not given to me directly by the T/A. The digester was first given to Senior Chief [name redacted], who the identified me as a beneficiary because I’m a chief. He chose me so that I could use it for generating fertilizer. And, if I had wished too, I would have given it to an ordinary person too. But, I thought that it wouldn’t have been in safe hands. I believed that an ordinary person would have sold it to bicycle taxi people to make seats, or to people who make beehive boxes. You have found it today because it was in safe hands. If it was given to an ordinary person, you wouldn’t have found anything. If I was not a chief, I could have sold it way bag (laughs).

**Interviewer**: (laughs) how can people use that in a beehive box?

**Interviewee**: Because it is good plastic, people use that to make a cover for the beehive to prevent water from getting inside.

**Interviewer**: So you didn’t sell it or didn’t make a beehive box, I have seen you have one, because you are a chief. You wanted to save face? (Laughs)

**Interviewee**: (Laughs) and that’s why it’s still here.

**Interviewer**: (laughs) I understand you got the digester because you thought if it was given to an ordinary person, it was not going to be safe. But, surely, there is another reason you accepted it. Why did you accept to build it here apart from what you have told me?

**Interviewee**: When we want to grow maize we start by digging holes and then put animal manure to act as fertilizer months prior to planting. We use manure here because the soil is so degraded and without doing that, we can’t harvest maize. So, when I was told that the digester produce fertilizer I had no choice, but to take it.

**Interviewer**: Some people have told me that animal manure is not a good fertilizer, what’s your take?

**Interviewee**: It helps a lot; what you do is, you mix 20 kg of ash with 20 kg of animal manure, then add baking soda of K50 or K100 (50g) and yeast of K50 or K100 too. Then, add water and mix again until the mixture gets wet as mortar. After that, you put the mixture in a plastic bag, and then cover it with a sack bag. After a week, you take it out and add 5kg of inorganic fertilizer and mix as the first time. Then, you put back the mixture in a plastic bag, and then cover it with a sack bag and wait for a week or so. After that, the manure becomes effective as inorganic fertilizer and the maize you get is the same, as you would get after using inorganic fertilizer. And with that manure, you don’t whine when you are left out of the agriculture subsidy program.

**Interviewer**: Well explain. How did you learn this?

**Interviewee**: We have agriculture extension workers who teach us this, and they call this type of fertilizer “Whitman”. So clever people make and use this type of fertilizer, and others who are lazy they don’t. But, this type of fertilizer is good.

**Interviewer**: I didn’t know that it`s name is “Whitman”. Did you know anything about biogas before?

**Interviewee**: No. I learnt about biogas the time they told me that they were going to bring it here, but I haven’t been given up to date.

**Interviewer**: What did they say about it? When you asked them, what did they say it is?

**Interviewee**: I didn’t ask them. They told me about it without asking them, and they told me that with biogas I would be able to use it for cooking and a source of fertilizer for vegetables and maize.

**Interviewer**: Okay, how was the selection process like?

**Interviewee**: I don't know how Senior Chief [name redacted] was chosen, and how he chose me. I don’t know if he was chosen by the T/A - I don’t know. I just know that the instrallers we are directed here by Senior Chief [name redacted].

**Interviewer**: What were your expectations? First time I have seen that you expected to use it for cooking. Secondly, you expected people to be getting manure from it. How was this going to happen? What was your plan?

**Interviewee**: After installation, I expected to go to training. Then after the training, I would have made this a community thing by mobilizing all the chiefs under me to sensitize their people about biogas. Also, I would have asked everyone who had livestock, not to throw away manure, but to bring it here so that they could get processed manure from the digester after sometime. I wanted to do this to develop my community.

**Interviewer**:That was a brilliant idea. If it could’ve worked, a lot of people would have benefited.

**Interviewee**: I’m a chief who is known for spearheading community development initiatives. I remember one time I went to Hippo Lodge for stakeholders meeting, and I was applauded for my works. The people there commented that I’m doing a good job, and that they thought I was a big tall person because of my works. But, I’m just a short and slim old person. So, I thanked them very much for the compliments - and it’s a good thing to do the good work because when you die you are rewarded by God afterwards for caring for his people.

**Interviewer**: Oh, nice. What religion are you?

**Interviewee**: I’m a Sunni Muslim.

**Interviewer**: Okay, nice. What kind of training did you receive? Did you have a pre-installation training?

**Interviewee**: No, we didn’t have anything in regards to biogas

**Interviewer**: Were you told about training?

**Interviewee**: No, they didn’t. I think training would have only happened after installation. After installation that's when they would have said let's go to Hippo Lodge or any other extravagant place for training (laughs).

**Interviewer**:You have been in some nice place, uh.

**Interviewee**: (laughs) yeah, and I thank the railway company here for that. They have got me to some nice places and they even provide fertilizer to people.

**Interviewer**: How did you meet your energy needs before the intervention?

**Interviewee**: Here in Mkasaulo and Malawi at large, when we want to cook anything, whether it is sweet potato or cassava, we use traditional three-stove-cooking fire.

**Interviewer**: Where did you get firewood?

**Interviewee**: In the past, firewood was not hard to find. That time we used to go to the game reserve to steal firewood, as it was not fenced. Some used to go to the mountains and bush lands to get wood. But, now firewood is scarce because of high population growth, so we use maize cobs and firewood. Luckily, we have now energy efficient stoves that use less firewood. With that, only three sticks of firewood are enough to cook without problems.

**Interviewer**: Do you buy wood?

**Interviewee**: I shouldn’t lie, we don’t.

**Interviewer**: How far are your firewood sources?

**Interviewee**: It’s very far to go to the mountains to source firewood. As for me, I thank the European Union for giving me trees, which I get firewood from.

**Interviewer**: How did that happen?

**Interviewee**: The European Union came here with a tree-planting project where people were given tree to plant, and they made a community woodlot. So, every (group) village here has a forest, and the people have trees too.

**Interviewer**: For a digester to work it needs animal manure. Did you have livestock that time?

**Interviewee**: Yes, I had goat manure. And, many other people in this community have goats too.

**Interviewer**: How many goats did you have?

**Interviewee**: I had 15 goats. But, people were stealing from me, so I transferred the remaining two goats I had to my mother’s house. But, if you another digester could come, it wouldn’t be a problem because I can easily get manure from other people or even buy. It’s common to get manure for free because people find removing manure from cow houses a difficult task, so when you offer to do that, it’s appreciated a lot.

**Interviewer**: (laughs) how would someone steal from a chief?

**Interviewee**: Thieves don’t steal without using juju. They make you go to the farm and upon returning, you just find the doors open and your goats gone. They even kill the goat in the goat house without you even noticing. (Laughs)

**Interviewer**: I thought that only happen to ordinary people not chiefs!

**Interviewee**: You can’t understand thieves; they steal from a highly guarded place and you wonder how what is even possible. So, if people are able to steal where there are guards, what more here.

**Interviewer**: My next question was to ask you how it worked after commissioning. But apparently, that question can’t be answered because it never worked - it was never installed.

**Interviewee**: It wasn’t installed and they didn’tcome to line the hole. If it was installed and lined, then I would have been following up to see what was happening. Today, I don’t say that I was given a digester, but I say some people came to me, so that I could keep a digester bag and a pipe safe for them. And, I haven’t been paid for that service, so it’s as if I have worked for nothing too.

**Interviewer**: In your opinion, why was it not installed here?

**Interviewer**: I keep asking myself that question. Sometimes, I think it’s because I’m a chief, so they thought that if I got it people would not benefit anything out of it. But, if they had told me that I was not supposed to get the digester, and an ordinary person from this community was suppose to get it, I would have given it up. And it’s not like I wouldn’t have benefited from that arrangement, no. I would have been going to that person as well to get manure from the digester. So, I accepted it because I’m old, so it was only necessary for me to stop going around searching for firewood to make life easy for me and my wife too.

**Interviewer**: So they thought if you get it other people wouldn’t see its benefit, and maybe they didn’t like how you were chosen. They thought it wasn’t necessary for a chief to get it. So to make life easier for themselves, they just decided not give you the digester.

**Interviewee**: On that, I totally agree. It could be that.

**Interviewer**: How many people were expected to use the gas and fertilizer?

**Interviewee**: It was four people.

**Interviewer**: I believe that even before installation, you were told what things you would require to operate it, and when you saw that you could manage to get the requirement, you accepted. What were the operation requirements?

**Interviewee**: They just told me that it would need feeding with animal manure, whether it is cow manure, goat manure, pig manure, or chicken manure.

**Interviewer**: And water?

**Interviewee**: They didn't reach that stage. I think they would have told us about that at the training. After that time, we were only told to find animal manure.

**Interviewer**:So they didn’t tell you how prepare to cow manure?

**Interviewee**: They could have told me about that during a training at Hippo Lodge (laughs). And, we could have had our note pads writing everything down (laughs)

**Interviewer**: So up to date that digester bag never got fed?

**Interviewee**: We never installed it, and we never fed it. After the installers gave me the bag, I just kept it in that white building.

**Interviewer**:From this, I don’t think my next set of question can be answered… I wanted to ask you if it met your needs and even challenges. Did they talk about maintenance?

**Interviewee**: I think they would have told us about repairs after it was installed after the training. They would have also given us their numbers to report any issues, but after installation.

**Interviewer**: If it was installed, what would have been your cooking needs?

**Interviewee**: To cook on it three times a day. First, I wanted to be able to cook breakfast in the morning. Then, cook lunch and supper before going to bed.

**Interviewer**:What challenges did you in regards to this whole thing?

**Interviewee**: It hurts that we didn’t have an opportunity to learn about it. The other thing is that the digester bag was damaged by termites.

**Interviewer**: How? Did you put it on the ground?

**Interviewee**: Initially, we kept the bag in the house but later found out that the rats were eating it up. So, we got it out and that’s where termites started eating it up too.

**Interviewer**: Did you think it could be safe outside?

**Interviewee**: It’s a thick plastic bag that cannot be damage by water, and it’s not like I literally put it on the ground. I did lay some bricks on the ground, and then I placed the bag on top the bricks. And at that time, most of it had already been damaged by the rats, so I didn’t care about it, and that’s why I even put it outside.

**Interviewer**: What do you think of this information? Do you think it’s helpful?

**Interviewee**: We were supposed to learn this information at the training. What I mean is after installation, they were supposed to get all the beneficiaries, not just me, to training and teach us these things, so we could have operated and maintained it.

**Interviewer**: We are in September of 2022, let’s suppose the people who gave you the digester bag and pipe call you, what would you say?

**Interviewee**: It’s straightforward, I can simply ask them to tell me what stage of the project are they now? When are you coming? And then I would tell them that the digester bag was eaten by termites and rats. It’s been a lot of years, is it 5 or 10 years? And, all the children that were born around that time have reached puberty stage now (laughs)… So, if I can have a chance to talk to them I would ask them to update me on the project, and to tell me if they would ever come again or not. And if they are coming, I could ask them to bring a new digester bag because the last one is broken, and to bring a stove and the remaining pipes as well.

**Interviewer**:I have seen that you are using the digester bag on your pigeon house?

**Interviewee**: I had a thin black plastic sheet, but after strong wind, it was damaged. So I just decided to cut the digester bag and use it as roofing sheet for the pigeon house. And, it’s better to keep it there because it can’t be lost and it may be used as an evidence that I received a digester bag. I remember, I worked in the gold mines in South Africa, and to get new protective clothes you had to show the old protective clothes, and that’s why I keep it too.

**Interviewer**: I’ve seen you have used some remaining part of it as a fence for cassava stalks?

**Interviewee**: Yes, one day I saw that rabbits were eating the cassava stalks from that edge of a corner, so I decided to put it around there and use it as a fence.

**Interviewer**: We are going towards the end of the interview. How do you meet your energy needs now?

**Interviewee**: I get wood from the trees around my house and use it on the energy efficient stoves.

**Interviewer**: Now you don't have livestock. The only two goats you have you keep it at your mothers place...

**Interviewee**: I decided to put it there because I didn’t want thieves to steal it, and give me a heart attack and die. So, if I want to make manure I go there to collect manure and make “Whitman” fertilizer.

**Interviewer**: How much the reactor cost?

**Interviewee**: I wasn’t told, but I think it’s a lot of money. But, I can’t know the actual amount though.

**Interviewer**: Did you contribute anything in kind?

**Interviewee**: Nothing, I only lost my energy on it without getting anything out. But, since it was dug within my compound, I can always use the hole as a refuse pit when I want to

**Interviewer**: I have seen that you haven’t covered it up..

**Interviewee**: It’s a big compound and it’s outside the fences, so I have no problem with it.

**Interviewer**: You said you didn’t line the hole, right?

**Interviewee**: Yeah

**Interviewer**: Do you think the reactor or the pipe was imported from another country?

**Interviewee**: Everything here in Malawi is imported from South Africa, Japan or China. Even the organizations that support us are from outside the country. Of course, we have our local organizations, but they also get funds from international organizations to survive.

**Interviewer**: So you think it’s from another country?

**Interviewee**: Certainly.

**Interviewer**: If it had worked, do you think it would have helped you to save money?

**Interviewee**: If it was installed properly and worked, chiefs especially those who weren’t given would you have learnt about it here and eventually adopted it in their villages. And, also we could have create a community team to oversee its operation and even be responsible for managing and selling the fertilizer to other people, and also telling them about the digestate. So, in the end we could have made biogas known to so many people. It would have also brought money to the community, and the same money would have been used for repairs too.

**Interviewer**:What is your opinion of biogas?

**Interviewee**: Biogas seems to be a good thing and we would like to have it here. But, whoever is going to bring it here again shouldn’t do thing unorganized and in haste. He should do it a way that it should work and help people. So, I would be happy if someone else gets it. Or, if they decided to bring it here, I can also be happy.

**Interviewer**: When you say things should not be done in an organized manner and haste, what do you mean?

**Interviewee**: They should bring the bags, the pipes, line the hole and take us to Hippo View Lodge for training.

**Interviewer**: Last one. If you could have designed your own waste or energy intervention, what would you have chosen instead?

**Interviewee**: I choose a solar system, so that people who sell sweet beer (thobwa) can come here to keep their drinks in a refrigerator. Also, I would like people to come here and charge their cell phones, though I don’t like cell phones because they perpetuate prostitution and are affecting cultural norms and practices. Nonetheless, I would choose a solar system because I can use it for lighting, while I’m using it for business in the afternoon.

**Interviewer**: Many thanks, do you have any last words?

**Interviewee**: I’m a chief of development, so if there’s any type of developmental project consider me.

**Interviewer:** Understood**.** Thanks for the interview.

**Interviewee**: Thanks for coming too.