**BIOGAS ASSESSMENT PROJECT**

**Site ID: 12**

**Date: July 20, 2022**

**Interviewer**: First question, who designed this digester?

**Interviewee**: [name redacted] from Mzuzu Universities designed this digester.

**Interviewer**: Okay, who founded this?

**Interviewee**: UNDP funded the digester.

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

**Interviewee**: It was only [name redacted], who came as a consultant.

**Interviewer**: Okay, who built this?

**Interviewee**: COPRED identified local artisan who built the digester.

**Interviewer**: How did you identify them? What was the procedure, or you just handpicked?

**Interviewee**: Oh, no, you know people possess skills, so we identify people with skills in septic tank construction because digesters are more like septic tanks. Therefore, we identified people with experience and the pedigree of constructing strong septic tanks that last for years.

**Interviewer**: Okay, what was your role as COPRED?

**Interviewee**: As COPRED, this was our second digester; the first digester, we constructed in Soche, but did not work. The first was a floating drum biogas, designed by a Japanese man failed - it never worked. So, to advance our agenda on promoting natural resources management, and to reduce the rampant cutting down of trees here, we thought about strategies aimed at protecting the environment. At the same time, we saw people here were cutting down trees carelessly and had a lot of cows that could help them use for cooking. That is when we thought of an alternative source of energy for cooking. Therefore, with our little experience we came with a plan to install a biogas digester here to save as a demo and as center of learning of biogas so that they could adopt the technology. So, in a nutshell, our role was resource mobilization as well as community mobilization for biogas with the aim of reducing unnecessary cutting down of trees.

**Interviewer**: When was this? When was the digester built?

**Interviewee**: In 2011, that was when the initial design was made, and it started working in 2012.

**Interviewer**: When was the first digester that failed built? Was it built around the same time?

**Interviewee**: No, no, that one was the built in 2010 with funding from MEET.

**Interviewer**: So this one you worked with [name redacted] in 2011 and it worked, nice! How did UNDP select you as a beneficiary? Did you follow any procedure?

**Interviewee**: We saw an article calling for proposals, so we showed interest and capacity that we could run biogas.

**Interviewer**: Was the article in the newspaper?

**Interviewee**: Yes, it was in the newspaper.

**Interviewer**: Daily Times?

**Interviewee**: Yes!

**Interviewer**: I want to know, what was exactly on that article in that newspaper?

**Interviewee**: You know there are opportunities for innovative ideas on conservation and protection of the environment. So as COPRED, we thought of biogas digesters as an intervention that could help conserve and protect the environment, especially cutting down of trees. In addition, we wanted people especially with cows to adopt the technology to help conserve the environment while using their cow manure for cooking as well. So, when we built the digester here five people were using it in a communal kitchen, and in total, people were getting 8 or 9 cooking hours per day, so you can see that people were saving K12,000 to K15,000 which they were spending on firewood. Then, we thought that if five people or more could use the technology, then the use of charcoal and firewood would reduce dramatically thereby protecting and conserving trees. So, biogas was a byproduct of innovative ideas that we came up with.

**Interviewer**: (laughs) it was really an innovative idea because for an organization like UNDP to give you funds, it means you really deserved it.

**Interviewee**: Yes, it was.

**Interviewer**: How long was your project?

**Interviewee**: It was for two years.

**Interviewer**: So in two years you built this one as a demo and five people benefited from this, nice. Apart from this, did you build another one? Or did anybody built one?

**Interviewee**: This one was a demo, and as you know digesters come in different sizes depending on the amount of gas one wants to produce and use - So this digester was strictly built for demonstration purposes. However, during that time, there was a certain man who had five cows and was keen on building a biogas digester, but he passed away in the process. Sadly, when he died his family did not show interest like the one he did, so it never materialized. So, to answer your question, this was the only digester we installed and no one else adopted the technology.

**Interviewer**: Mmh.

**Interviewee:** so had he lived, I would have been saying that one person adopted the technology in this community.

**Interviewer**: Apparently, no one adopted your technology, and looking at you objectives, we can say your project one of your objectives did not to live up to your expectation. Why did people not adopt it? And, was there interest in the technology in general?

**Interviewee**: People from this village or other places?

**Interviewer**: Anywhere.

**Interviewee**: We have had a number of people coming from Zomba, Ntcheu and even Nsanje.

**Interviewer**: How did they know about you? How did they know that COPRED had a digester?

**Interviewee**: We had a quarterly meeting with UNDP partners at Grace Bandawe [conference centre], and we gave a presentation on biogas.

**Interviewer**: Grace Bandawe in Blantyre?

**Interviewee**: Yeah, so when we made the presentation, people were very interested to learn more from us.

**Interviewer**: Which organizations were present at the meeting?

**Interviewee**: (Laughs) I cannot remember, but a couple of organizations were there.

**Interviewer**: Before, you saw the article in the newspaper calling for project proposals. Did you know anything about biogas?

**Interviewee**: Yeah, as I mentioned, before this one was installed here, we installed another one in TA Nsomba – Soche, but was not successful. So, I learnt digester more about biogas from the first digester that was funded by MEET. But before that digester, I also learnt from people that, people use animal manure in digesters to produce energy for cooking and lighting.

**Interviewer**: Who are these people? Who did you learn from?

**Interviewee**: Mmh, I cannot certainly remember where I learned this. But, I think, we learned this from our executive director, who himself learnt about biogas when he went abroad, I think it is when he went to Kenya.

**Interviewer**: Okay, so when you saw the article, and with your knowledge, you were like this is it?

**Interviewee**: Yeah, they were calling for proposals on sustainable land management, so when we looked at sustainable land management in respect to natural resource management we thought of biogas. And of course, I believe there were many organizations that chose their own way of implementing sustainable land management - and also, it’s not that in our project we had only biogas, there were also other components or activities too in regards to sustainable land management.

**Interviewer**: Like what components or activities?

**Interviewee**: Like I said, the project was about sustainable land management, so we had activities like construction of control ridges, tillage generation, bushfire controlling as well as tree planting which were intended for reforestation purposes. We wanted people to plant fruit trees particularly, because after selling the fruits people are able to support their families.

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

**Interviewee**: We expected that after the demonstration people would adopt biogas technology. After that, we hoped that the people would stop using charcoal and firewood for cooking thereby conserving the environment particularly by reducing deforestation.

**Interviewer**: What did [name redacted] say you should expect from the digester?

**Interviewee**: He was only here to provide expertise in the construction of the digester; and he was simply coming back and forth during construction. The last day he came, he just told us to feed it and wait for some time. I have forgotten how long he told us to wait for it to kick-start.

**Interviewer**: Mostly, it takes about one month……

**Interviewee**: Yes, yes, it was around 21 days. We waited for 21 days and after that the digester started producing gas. We had high hopes in him and his work because he told us he had constructed some biogas digesters in Zomba; and when he finished it really worked, and we were very excited.

**Interviewer**: Nice, did you receive any training from [name redacted]?

**Interviewee**: Yes, and that is why I’m able to explain everything now (laughs). If this was not done openly; if we were not involved in the construction work; if we were not taught how to manage it, then I wouldn’t have been able to explain this to you now (laughs).

**Interviewer**: (laughs) yeah, yeah

**Interviewee**: (laughs) He trained us and you can even appreciate yourself now; and that’s why we were able to keep it running. On the other hand, you cannot learn anything through training, some of the things you learn through experience. For example, the digester did block once and we came up with ideas to unblock it. Also, one time, when we opened the valve, we did not get gas on the burner. But, when we pulled the pipes, we got gas on the burners, and after that we were able to establish the cause as well as the solution for that particular failure. We also learned that during the production of biogas the system also produces bubbles which sometimes accumulates in the system and eventually block the gas. Then, we would think of ways of unblocking, and eventually we came up with an idea of using compressors to unblock the digester (laughs).

**Interviewer**: (Laughs) yeah, yeah…..

**Interviewee**: so it's not as if you need to be taught everything, some of the things you learn through experience and adversity.

**Interviewer**: Sure. So what kind of training did you receive? And, how many people were involved?

**Interviewee**: 5 staff and 10 community members; so around 15 to 20 people were trained.

**Interviewer**: What was said during the training? What was the training like? How many days did it take? And, what type of training was it?

**Interviewee**: During the training they mentioned several things that I can recall now. Firstly, he explained to us how the digester was designed and how it operates. Then, he talked about feedstock preparation, because if it’s not correctly done, it turns the digester bag into a septic tank. He also talked about the benefits of biogas, which were pretty much the same reasons we decided to come up with this innovative idea.

**Interviewer**: Nice, nice. How was this done? Is it like it happened in class or on-site?

**Interviewee**: It was both; first, we sat in a class, and then we had a practical session. During the presentation, he also presented on construction of the digester because not all the people in the class training were present during the construction phase. So, he explained about the reactor, gas chamber, outlet and the digestate, brick wall and all that.

**Interviewer**: Oh, Yeah (laugh), I can see you were able to follow – and that he was serious about the training.

**Interviewee**: (laughs) He explained everything, can you come let me show you [Stands up and goes to the site to explain the system] Initially, we thought of making the effluent the floor directly to the garden, but later we decided that will not look healthy, so we made a reservoir there. So, this is where we were feeding the digestate, this was the outlet, and the reactor was here.

**Interviewer**: Oh, nice, nice. After the training, how did you feel? Did you feel that you could operate the digester?

**Interviewee**: I did not only feel like could operate it, but I also felt like I could even provide technical support to others.

**Interviewer**: Oh (laughs) it was really successful training, I see…

**Interviewee:** Yeah, because he was simply directing. For example, he could just say; take the pipes and go to a plumber to put threads on the pipes; go to a welder to fabricate this and that, we what to do this. So, we were doing everything and it was more hands-on, and even the artisans were only provided with technical support and can pretty much do everything by themselves now - and it’s good that we still have people who can build this around the community.

**Interviewer**: You chose to build this one to conserve the environment as well as to allow people to learn and adopt the technology. You have also said you wanted to provide energy for cooking. Is there anything else that compelled you to build the digester here?

**Interviewee**: Firstly, this was a demonstration. We brought it here because at that time we had cows, so we knew that feeding was not going to be a problem, and as a learning center we hope people would learn and start constructing their own biogas digesters. Also, as you know, in Blantyre city, the cost of living is very high, price of charcoal is also high, firewood is also expensive, and when we saw that people here had cows, we wanted them to use their cow manure for cooking thereby helping them to money. So, we knew if we could make people use biogas, it was going to make them stop using charcoal and firewood which results in deforestation – and when we considered the large number of people living in this area, we were pretty sure that a lot of trees would be saved.

**Interviewer**: Before the digester, what were you doing with cow manure, and how many cows did you have?

**Interviewee**: Before the digester, we were gathering the cow manure to apply it as manure for our crops and vegetables. Also, COPRED staff was coming to collect the manure for their gardens.

**Interviewer**: How were your beneficiaries meeting their energy needs before the digester?

**Interviewee**: When you have nothing you always find a means to survive. But, it was very hard for them, because they were wasting money on charcoal and firewood, so this one helped them to cut their expenditure on charcoal and firewood. Also, as an organization, it helped us save money that we were spending on firewood to boil water for the cows to increase intake. Also, it lessened the work for our workers because it was really hard sometimes for them move around the community looking for firewood - so the coming of the digester helped us a lot.

**Interviewer**: Let’s look at its operation. In 2012, how did it work after commissioning?

**Interviewee**: It worked well. There were no major issues like I said. We only started facing challenges when the quantity of the cow manure reduced, because we could not feed it as we used to. All in all, we had no issues and we can be able to say it was producing four cubic meters of gas. At that time, we were in partnership with certain organization called Sustainable something, I have forgotten its full name, and they were in partnership with Renewable Malawi, so the supplied us with a meter. That’s why we were able to measure the quantity of gas it was producing per day. We were even able to measure how much gas was used for a specific time. Thus, in a day we were able to know how much gas was produced and used.

**Interviewer**: Sure, how did the records look like? On average, how much gas was being used?

**Interviewee**: I think it was 4.023 cubic meters per day, on average.

**Interviewer**: That’s produced or used?

**Interviewee**: That's used. It was very difficult to measure total gas produced because we did not have any storage. Also, it was difficult to gauge gas produced because gas production is continuously, and is used directly from the digester to the stove.

**Interviewer**: Why didn’t you buy storage? I mean, as an organization with funding from a big donor, did you see that a gas storage bag was necessary?

**Interviewee**: The funds which were located for the biogas was not much, and even the funding itself for the whole project was not that much. I think the funding K12 million for the whole project, so we could not have done everything. It was very difficult.

**Interviewer**: K12 million for everything, like trainings and other activities?

**Interviewee**: Yes, the training, construction, other activities, buying of seedlings, everything.

**Interviewer**: So, 12 million was for the whole project. Okay, how much money allocated to biogas?

**Interviewee**: Mmh, I don’t have the figures…

**Interviewer**: What were they operation requirements?

**Interviewee**: There was need of cow manure, water and labor for collection and preparation of the feedstock. Labor was necessary because feedstock preparation is daunting, as manure contain trash that needs to be removed before feeding to prevent blockages, so it need special people responsible for that.

**Interviewer**: When you talk of feeding digester, you talk of the initial feed for startup and regular feeding for gas production. How much did you use to start up the digester?

**Interviewee**: Mmh, it was a lot, close to 10 to 15 wheelbarrows, and we added 2, if not 3 drums (200 liters) of water. After that we started feeding it on regular basis, and sometimes we did notice that when we fed the digester,, it could not take more feedstock as it was full.

**Interviewer**: How much were you feeding it, and how regular?

**Interviewee**: We were not feeding it daily. We were feeding it every two days.

**Interviewer**: How many wheelbarrows of feedstock?

**Interviewee**: There was no specific quantity. Some days they could put one wheelbarrow, but they would not put more than three wheelbarrows. Mostly, we were feed it twice a week, each time with one wheelbarrow.

**Interviewer**: How much water did you add?

**Interviewee**: If it was two wheelbarrows of cow manure, we added 30 liters of water.

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

**Interviewee**: We had dug wells, and sometimes we could get water from the boreholes.

**Interviewer**: No far – each source was less than 100 meters.

**Interviewer**: How did you prepare food store?

**Interviewee**: We made a wooden stir for mixing the feedstock.

**Interviewer**: Where is it now?

**Interviewee**: (laughs) we used it as firewood in 2014 (laughs). But, we did not lose everything, some of the things are in that kitchen. I think the stoves and some pipes are there.

**Interviewer**: (laughs) who was responsible for feeding it?

**Interviewee**: We had workers.

**Interviewer**: How many?

**Interviewee**: They were two.

**Interviewer**: How did you identify them! Were they part of the organization or something?

**Interviewee**: Yeah, the people who were responsible for managing the cows were also responsible for feeding the digester. We employed them basically to look after the cows, and when the digester came they had to manage the digester as well - and they were even took part in the training because they were interacting with the digester regularly. Therefore, leaving them would have made this unsustainable.

**Interviewer**: Initially, how many cows did you have?

**Interviewee**: We had eight cows.

**Interviewer**: What happened to the cows? Did they die or you simply sold them?

**Interviewee**: As I said, we were making losses because of diseases and treatment. Also we had issues with the milk; the cows could get mastitis, as a result, we could have issues with our milk buyers, Daily Board.

**Interviewer**: What issues? Can you elaborate please.

**Interviewee**: They were saying our milk had low fat. They could talk about mastitis. Yeah, there were lots of problems.

**Interviewer**: Lots of problems indeed. We are going to end of our interview. Now, let’s talk about maintenance, what were the maintenance requirements?

**Interviewee**: As far as I’m concerned, maintenance requirements were concentrated on feedstock management as well as on periodic unblocking of the system. There was no need to wait for it block, to unblock it. For instance, after every three months, we were blowing the system with a compressor to ensure that it didn’t get blocked.

**Interviewer**: Where were you getting the compressor? Was it yours?

**Interviewee**: It wasn’t ours. We were hiring.

**Interviewer**: At what cost?

**Interviewee**: It was around K3000 that time.

**Interviewer**: Who was responsible for maintenance? Was it COPRED, the beneficiaries or the installers?

**Interviewee**: The biogas was not UNDP’s. This was COPRED's idea (Laughs].

**Interviewer**: (laughs) Okaaay, Okaaay….

**Interviewee**: This was COPRED's and it’s not like UNDP came to us to give digester. We sold our ideas to UNDP, and they were impressed, and funded our ideas. So, maintenance and even the identification of the consultant was not done by UNDP, it was COPRED's role.

**Interviewer**: How did you identify the consultant?

**Interviewee**: You know it's a global community and we share ideas. The consultant had worked with one of our board members, and that's how we knew him. So, we reached out to him through our board member to come and help us with the project.

**Interviewer**: Okay, great. Did the digester meet your needs?

**Interviewee**: Yes, there were no gaps…

**Interviewer**: But you had challenges, I’m seeing the problem of feedstock, Uumh? What were the challenges?

**Interviewee**: The other challenge came when the people responsible for feed it lost interest. As a result, the quantity of gas produced decreased as well.

**Interviewer**: Why did they lose interest?

**Interviewee**: It was all to do with the problems with cow management. The cows were getting infected with all sorts of disease, and the cows were not productive. I mean, when we went to Daily Board our milk was selling at a very low price. So, all this caused our workers to lose interest in cows, and eventually it also affected the feeding of the digester.

**Interviewer**: But, this was your farm and they were your workers, you would have helped them in the management of cows, or you could have find new workers if they were the problem….

**Interviewee**: It was not only them, even us were tired with the whole situation, and that’s when we decided to sell cow.

**Interviewer**: Another thing, who said you had issues with blockages. How did you notice the whole thing?

**Interviewee**: There were times we opened the gas valve and switch on burners, but we could not get little or no gas - and we knew that the system was blocked…. We did put the gas valve and stove in a closed kitchen to prevent children from going in. We were afraid that children could go and turn the gas valve and switch on the stove and ignite matches and cause an accident.

**Interviewer**: How long did it take to stop working?

**Interviewee**: It took three years.

**Interviewer**: So, in that time the problems you faced were to do with blockages and feedstock. What other challenges did you encounter?

**Interviewee**: Those were the big issues. On top of that, we had an issue with the stove. Initially, we were using a clay stove and it was not efficient. It was consuming a lot gas because we could not regulate the gas to the burners. So, when we saw that it was very inefficient, we made a modified stainless steel stove. Nonetheless, the problems continued because we didn’t get the modifications right - The standard wasn’t as good as a stove made in a factory. Of course, there was some kind of improvement. The modified stove was like and electric stove in a sense that we were able to regulate the amount of gas going to the burners with a control module. While, with the first stove we would not control the gas; we were on switching it on and off, and in the process having no control over output of the gas, hence we were losing a lot of gas at the end of the day. Also, we had issues with the pipes and the connections.

**Interviewer**: So when you encountered all these kinds of problems, did you call the consultant? I mean, what did you do?

**Interviewee**: We were handling all the problems ourselves. The consultant was only involved in the work before commissioning. We only called him when we were commissioning to ensure that everything was okay. Since then, we have never been in contact with him, and he has never visited this place again.

**Interviewer**: Why didn’t you call him to help you with the stove?

**Interviewee**: (laughs) the problem was not so big since we were still able to use the digester, and we felt that we could handle the problem. Also, when we considered the amount of money we could have spent on him, we thought it was not viable because the funds allocated were no longer there.

**Interviewer**: uh, we have this piece of papers, with issues associated with the digesters, their causes and the solutions, were you given something like this.

**Interviewee**: No, we were not.

**Interviewer**: What do you think of this information and do you think it would have helped?

**Interviewee**: Yes, the information would have helped to solve issues. But, then, we can’t attribute the failure of this digester to lack of this information, because the consultant explained everything to us.

**Interviewer**: … And you had all that information jolted down on a paper, I guess.

**Interviewee**: Yes, and that information became our checklist.

**Interviewer**: Okay, okay. We are going towards the end of our interview. How can you describe the current state of you digest?

**Interviewee**: Since it’s not working, I can say it’s dead.

**Interviewer**: Dead as dead can be? I mean, you have no hope that it can be revamped?

**Interviewee**: Yeah, we don’t have that idea now, and as you can see, we don’t cattle anymore and the farm failed altogether.

**Interviewer**: Why did the farm fail?

**Interviewee**: It failed because of the cows.

**Interviewer**: We have talked several issues, but I would like to know how it reached this state. Also, in your opinion, what really caused it to reach this state?

**Interviewee**: Because we had issues with cattle, and I believe that’s the only reason we are here today.

**Interviewer**: Now, that is not working, what do you think people who were using it as a source of energy i.e. cooking?

**Interviewee**: I think they have gone back to using firewood and charcoal.

**Interviewer**: How much did the digester cost?

**Interviewee**: I can say K 1 - 1.5 million. In total, I can say it cost not less than 2 million; the cost was high because of the consultancy. It was also costly to build a cow house. Another thing was that, at first we made the design of the cow house to feeding the digester directly,. But, we abandoned this because the cow manure was containing a lot of trash, so we were worried that it would block the digester. So this is what made the cost high, but I think the reactor itself did cost us less than 1.5 million.

**Interviewer**: And all this was paid by UNDP?

**Interviewee**: Yeah!

**Interviewer**: We are remaining with four questions. So as COPRED, What did you contribute? Is there anything else you contributed in kind?

**Interviewee**: We provided land, unskilled labor, bricks, and quarry stone.

**Interviewer**: Let’s put all this into quantities and costs… How much labor in total?

**Interviewee**: 3 laborers’.

**Interviewer**: How much did it cost you?

**Interviewee**: Uumh, I can’t remember the cost for all that.

**Interviewer**: Masonry?

**Interviewee**: It was two.

**Interviewer**: Did the biogas save you any money?

**Interviewee**: As I said, the coming of the digester made it possible for us to stop using firewood. So, biogas digester really helps. I can say, we were saving close to K15000 to K30000. And, it was not only helping COPRED in this regard, it also helped the people who were using it.

**Interviewer**: Did you do an analysis to know how much they were saving?

**Interviewee**: No, but it was around the K20,000 to K30,000 per month.

**Interviewer**: You said five families were using this. How many in total were you using this?

**Interviewer**: It’s a lot – more than 20 people.

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

**Interviewee**: Biogas is good but it requires adequate livestock. Also, it needs people who are committed to manage it.

**Interviewer**: So, it’s good, but it only requires commitment. What do you mean? Can you elaborate on that?

**Interviewee**: I means, for it to work you need to dedicate your time and effort on cattle management because it’s not about the biogas itself; it’s also about cow management. Like I said, our digester did not fail because it developed a technical fault. It failed because there was no livestock. You cannot manage it, if you are relying on other people’s cow manure, it's just not possible. It’s not possible to run it when you are buying cattle manure too.

**Interviewer**: Oh, you think it's not possible…

**Interviewee**: It’s not possible you need your own livestock run it.

**Interviewer**: Okay, last question, if you were to design your own waste or energy intervention, what could you have chosen instead of biogas?

**Interviewee**: In terms of waste management, I would think of an intervention where waste could collected and transferred to a station in order to allow the waste to decompose and use it as manure afterwards.

**Interviewer**: How can we develop such a system? And how can it look?

**Interviewee**: The system needs to have waste collection containers like garbage bags and waste bins in places where people dump waste, and from there the waste can be taken to a single dumping point, and then afterwards people can using the waste as manure in their farms.

**Interviewer**: In regards to energy, what can you think of?

**Interviewee**: Windmills, I think that’s also good for energy source, I have seen something like somewhere in Chileka. I don’t think it produce enough energy like electricity though. Still, windmills are okay, and also are good for water pumping.

**Interviewer**: You had your digester in 2011 and in 2014 it failed after 3 years. In your opinion, what is your opinion of biogas in regards to the future of biogas in Malawi?

**Interviewee**: Most people have not seen how it works, and I can say there is lack of publicity and awareness on biogas. I believe if there was enough publicity people would move away from electricity. People only think of electricity and firewood because there is no publicity on biogas. People are fed up with Escom - look at how Escom is failing to meet demand. If there were alternatives, who would opt for Escom? No one. So, if there can be enough publicity and if people see how this works, I believe people would adopt it, and abandon Escom.

**Interviewer**: As COPRED you had funds and one of your objectives was to make people adopt it? Why did you didn’t you publicize and create awareness so that people could adopt it?

**Interviewee**: We had the message but we rely on donor fund, so once the funds are exhausted there is nothing you can do. So need partners to beef in the support to help spread the message. On top of this you need to implement this as a model. The organization need to join hands to make this work by giving the digester to a small number of beneficiaries, so that other people can copy and learn from them. So, this thing to work needs money – not one organization can do this, it needs organizations to pump in money and work together; without that this thing cannot work with funds.

**Interviewer**: Last one

**Interviewee**: I thought you said the last one (laughs)

**Interviewer**: This is the last one as last one can be (laughs).There is something we did not talk about it’s about the digestate, how much was produced?

**Interviewee**: The slurry which was coming from there we were dying because we couldn’t use it for directly as it would kill crops because of its strength. So, we were gathering the manure for growing season, which is one year. Thus, at the end of one year we were gathering two Lorries of the truck you saw at our offices.

**Interviewer**: How big is that?

**Interviewee**: It`s 15 tons.

**Interviewer**: That’s a lot. Were you using the bio-slurry?

**Interviewee**: some people were coming to buy to use it in their farms, and we were also taking it for our personal use.

**Interviewer**: This is the very last one (laughs). How much were you charging on the bio slurry?

**Interviewee**: I think one ton was K8000.

**Interviewer**: Oh, thanks for the interview (laughs)

**Interviewee**: Thanks for coming, we appreciate your coming.