**CP1 - Interview Charcoal Producer Charcoal Association CAON Otjiwarongo 1-2-2023**

# Transcript

P1

I am from [name]. We are a specialist actually in screening. We buy the charcoals from the producers from the farmers we buy it, we process the charcoals, so we screen it in the different sizes and then we pack it actually in for the market for Europe. For BBQ, especially for BBQ. And we are also producing briquettes. That is actually in short.

I1

**And since when will you do this?**

P1

2013.

I1

How much do you produce here?

P1

We are buying about 10,000 tons a year exporting about 78,000 tons depends. Because some of the charcoal is also used, we sell it inland. Other guys are producing briquettes or we are selling it also for the cement factory where they use it for heating.

I1

**And you said you buy it directly from the farmers and farms themselves make the charcoal?**

P1

They are making the charcoal.

I1

**You buy them in the surroundings? Around this area?**

P1

Yeah, it's and we are FSC certified. We cannot say that we only drive 100 to 150 kilometres for the for the charcoal so. We check where the where are the producers are willing to register for FSC, so we must check a little bit. So where the far forest farmer actually is about 280 kilometres but our average kilometre is transport about 180 kilometres average.

I1

**And is this something because you say you're FSC certified? Is it something that you should check from the farmer?**

P1

It's an international standard.

I1

**Yeah, but they must have some standards that farmers also need to comply to. So is that then something that you checked before you buy?**

P1

Buy we don't check it. Actually it's the FSC body that is checking it. So we've got every year we've got an audit and then the guys are coming to us here at the factory. As well. They're coming for once to the factory, and they're inspecting the factory with all mostly for them, it's the social aspect is not so much that it implement now more. Another how do you say column where they check the social aspects more but they are looking that all that you have applies to all the laws in the country. So then they are also checking that your contracts are correct, that the PPE, that you're housing, all this stuff is also correct. So they are already checking for the, for the social aspects, but now they want to go a little bit more in there from next year. This year. Yeah, I think this year, yeah. And I'm not checking if they if the farmer. So I'm not driving to the farm and looking if everything is correct. This is the FSC body that is checking that one.

I2

**You just, you just get that certification?**

P1

That's correct. You go to the Internet to ask the body who's doing it. It's for. For example SGS is something there. Then you just write an e-mail quickly. Just have a look if this farmer with this name is FSC certified, then the right to make everything. Is fine and then it's good. And you can also get it from the Internet the. Database and everything else.

I3

**Do you need the FSC certification for the export to Europe?**

P1

Especially for Europe. The Europe market is especially looking the more and more for the last five years they are looking more and more for the FSC certificate.

I3

**Did you start off with the FSC certification? Did you start always getting charcoal from FSC certified farmers or?**

P1

No, actually we started first non FSC so just normal charcoal non FSC charcoal then we get into the game and then the our buyer in Germany or especially in Europe said we must go now for FSC and then talk about 1 1/2 years when we implemented everything. And get the farmers on board and so on. And yeah, took a while till we get to the FSC. Took a while but now I think we have got five years 100% FSC. We don't take any non FSC. It's a social aspect and also protecting the industry to only do FSC because the FSC farmers and producers are there doing the correct way. Actually if you call it. That they're looking for the social aspects and everything is correct and in the non FSC market it's not so it's not so good monitored especially.

I1

**So then you buy the charcoal from the farmers and then here what is it that you do here?**

P1

We just screen it. They are bringing it and then you screen it. They're bringing it like bulk and then you screen it into the different sizes. Everything below 5 millimeter. You don't have actually a good use for that one. That is the sand and ash, we don't use that. We cannot use it. We just give it to the people to put it into the soil and so on. It's good for the soil, for the for agriculture and so on, it's very good. But yeah. And then the five to 20 millimetres, we call it, fine. It's the fine charcoal. Smaller pieces, this one you crush again and use for briquettes. And then the 20 to 55 or 60 millimeters so barbecue charcoal that you use for BBQ or whatever, and then your 60 millimeter and above just for restaurant charcoal, you just call it restaurant charcoal because the restaurants are using it very often for their brice when they are buying or grilling barbecuing. They use the bigger pieces it hold longer. And then we just pack it ready for the supermarket. That is for us very important that we produce charcoal that is ready for the supermarket, that we have the most of the value chain, keep it here in the in Namibia. If you see later, then you go through. This packaging is going directly to the supermarket in Germany or Netherlands as well, yeah, there's a lot then.

I3

We have to look out for it.

P1

Yeah, definitely. I think these that we are packing today is for the Netherlands. Maybe I must see

I3

**And do you pack it under [name]?**

P1

The supermarkets, the supermarkets in Europe give us the packaging. So they are using their own brand, but we put not on all not all of their theirs. In the last two years, we are putting more and more story about Namibia on this on this because this is also a marketing tool for the people because we don't have rain rainforest here and so on and we don't actually have a problem with the bush as you might know, we want to get more rid of the Bush. And the bushing encroachment is getting more and more. And so the story behind all this is a very good marketing tool also for people in Germany.

I3

**But it will be stated that it comes from Namibia?**

P1

And also if you have the FSC certificate on there, then you can also trace it back actually where it was coming from. So you can trace it. It's not the point that FSC is looking after, but we are doing it already so we can trace it back to the farmer where it was produced. But it's a little more for the end user actually or most of the companies are looking for.

I1

**And how many people work here?**

P1

Here the company it's about 110.

I1

110.

P1

And then on, we've got about 25 farmers. That depends on it's going up and down a bit on these farms there are about. So average 20 workers on the farm for the charcoal.

I1

**How is the balance between male and female in the empoyees?**

P1

We've got about 80% women.

I3

80%?

P1

It's quite funny. We started the company and then when we started 2013, then we just get some people that want to work come in and then we did had all this monday problem, all of the men were not there. And so you see, yeah.

I3

**A bar problem?**

P1

Yes, yeah and so we decided actually on the Monday it's also working. We're just working with woman, so just start going on then. I think it was about at least two or three years. It was nearly 100% packed and everything by woman.

P1

So it's also for us it's very important for us actually to employ more women actually because it's not the it's yeah, it's not the skilled work that we are doing here, it's not skilled. You don't have to have a grade or something or it's just the packing. It's very easy work actually also. And they learn it very fast, and there's a lot of women that are sitting at home don't have work, don't have opportunities and so on and say can we check that we put more and more women into the places and it's working very well, yeah.

I3

**Are they from this area?**

P1

Yeah they are coming from Otjiwarongo, actually. Some of them are not from Otjiwarongo, they've got still the like. They're coming from a village from the north or from the from the east or west or something. So, but they are based in Otjiwarongo. Kids are going to school the most of them are here.

I3

**And do they belong to a charcoal union?**

P1

Yeah. We have got the. Do you do you mean a union for the workers? There's not a charcoal union, actually. It's a Workers Union for agriculture especially, and there was a lot of people in the Union, but they did get out of the Union. They don't use it anymore, they don't want to, but they have got the opportunity that they can. So it's in our policies that you can anytime go into union if you want.

I3

**And you belong to a charcoal union?**

P1

You've got a charcoal association. Keyon before it was NCA.

I3

And you get all your work as a set contract? And I've heard from some farmers that they say they didn't harvest in the summer. What do you do then? Or do they?

P1

Yeah, normally or like 80% of the production of the charcoal is working like that. Most of the workers are going December home because they are coming from the north from Namibia and then they go home to their families. May maybe they are planting some crop and something for the families in their villages and so on. And then they come back like in January, February. And also January or December, the rain starts January, February, March, April's rain season here, and you cannot produce so good charcoal in the field, because it's the rain, then the charcoal that's getting wet, then you must dry it again. And so when the people are coming back the most of the farmers are doing it also. They're the guys are just chopping the trees. They just chop the cheese and then they put it on the side and then maybe in March, April, they start. Burning the producing actually burning the charcoal so the charcoal production has a little. Bit of a. How you call it? A dead season or a difficult season from December till March when our production.

I3

I can't imagine European people barbequing then.

P1

The biggest problem we have at this moment. We must export now the biggest volumes in this month. Because we must ship it out till end of May for the season. If we don't get it out eight of May. It's not in time, and unfortunately I must. Maybe you could put it on a bigger agenda on your side here and unfortunately yet for example from ALDI, Lidl and the contracts from the from the supermarkets in Europe, we only get the contracts in September, October, very late, very late. So then we must then the guys in Germany who is doing the import and the contribution everything in in Europe. They must make the bags and so on, and then we start packing in October and we only have a short time to pack it. And it's I cannot understand it. We must have long contracts for everything on our side. But the farmers also are not yearly contracts and so on. But the supermarkets that are selling the stuff to you, they're making a yearly contract every year and it's a fighting every year for this contract and we don't know if we can supply or not supply. We are doing all the social aspects that we are doing and implementing and putting into place, but supermarket on the otherside just take wants to have. How do you say? Everything in his pocket to say. And it's very difficult for us.

I3

**And do they give you like a quota what you have to deliver?**

P1

Yes, we make contracts. And the well the, we've got the big company in Germany that is that is doing the distribution actually in Europe. So we sell to them and when they got their contracts normally in September, they fix all their contracts till hopefully end of September. Not all of them but the most of them. Then we can actually fix also a price and quantities and everything, yeah. So and then from June, July, August is a very difficult time starting for us as processes we don't get the volumes that are getting out because we are waiting for the new contracts and then the our production is going down on our side. But then the farmers on the other side, they are producing a lot now. And they want to send in. And then we have to store a lot of charcoal so we have a lot we at the moment we've got a little bit of 3000 tons stored. Here, because we don't know what is the rain season coming that we have it all here. That we can produce for the market. So we are doing a lot for the market actually what the market is doing nothing for us.

I3

Sounds a bit like the European market. **Do you have like set contracts with the farmers? How much they should deliver?**

P1

Yes, we are asking them how much that we can also make our planning for the for the year and we ask them which month do you want to send how much volumes do you want to send. So we are setting that up, then we have our volumes that we see that we are getting the charcoal. And that we have also the supply that Europe needs actually in that time.

I1

**And these farmers are these all commercial farmers?**

P1

Yes, yeah, yeah.

I1

**And would you? Would you consider also taking the charcoal or bush the communal farmers in the area?**

P1

Yes, if the permits are correct and they are FSC certified then we can take everything from everyone. It doesn't matter I'm not making a line if it's commercial or communal. I don't make a line there. It's for me. It's only FSC charcoal. I need FSC charcoal. I don't want to go for none FSC. Unfortunately, a lot of the communal areas are there was about two years ago, there was a big problem with the permits as I know they didn't get the permits from Ministry of Agriculture and there was a lot of issues. And then, there they were selling a lot of wood actually also to South Africa and so on. But I don't know if that problem is solved at the moment I must ask the.

I3

No not yet, no.

P1

Yeah, not yet solved. Yeah, I know. It was about two years on that again. Now they want to. They want to check that. And also we have from the FSC the body that is doing the FSC, they did a lot of efforts to get in the communal area and to get the people there for FSC to registrate them for FSC charcoal. But I'm now not anymore on the board there, so I don't know what's going on that's going. A little bit out.

I1

**Are you wearing the board of FSC?**

P1

No, not on the. On the NCI. But yeah, we are also doing every year, VCI. I don't know if you know VCI? It's the European thing, business, social compliance institutes and they are looking for especially all the social aspects. When you see where my Gray hair is coming from, then. It's from the VCI. Now they're taking it's actually very good at the beginning when we started the company at the beginning it was quite not structured very well. And then they decided especially the one customer ALDI they said then we must go for the VCI and then we did had our first audit. It's a catastrophe. So we didn't get there, but then it was a learning process to get into the system and it gives us a lot of systems that we implemented. The contract was not correct at the beginning and so on and so on that. So that gave us the opportunity to get everything in place correctly and that. Disputes and everything are gone. We don't have anything because everything is structured. The rules and regulations are put in and so on and so on. So it helped us a lot actually it was very good for us.

I1

**So what aspects are there? For example, you mentioned contracts.**

P1

Are there complex looking working hours? Often safety is a big, very big thing. Checking all the laws that you're implementing, the structure is everything correct. Two days audit.

I3

**Are you like the only company that has VCI?**

P1

A lot of companies are delivering to this company in Germany. And so they all have to comply to this one.

P1

Yeah, especially yeah. Ali is also in the Netherlands, yeah.

I3

Yeah, we know.

I1

**And what do you consider the biggest challenges?**

P1

Shipping lines at the moment is definitely the last years with all this container shortage and so on. It was the biggest the biggest challenge that we have to get containers to comply to the shipping lines and so on. So on and then actually also with the charcoal, it's not. If you don't comply to all the rules and regulations then. There are a lot of sharks also in this in this industry. And then they are packing directly on the farm. They don't weather the charcoal and then the charcoal gets start burning and so on. And then there are big, very big, big risks in that area of the ship burns down is, you know, what is happening then. So we did had unluckily 3 incidents in the last year, two years. Where the containers burned. And the one in the harbour and 2 outside of the harbour. So just before loading so and that is also a big challenge that we have that all the people in the industry keeps to the rules and regulations with the cities challenge that we have at the moment because the shipping lines are a little bit tense about the transporting charcoal. It makes it also difficult.

I3

**With your products going to container all the other companies charcoal?**

P1

No. We are picking like for my charcoal or our charcoal is going in one container.

I3

They take more companies.

I2

**Yeah, and who arranges that? That transport. So is it like the exporter you have in Germany or anywhere they arranged for the shipping lines so who takes care of that because you export right, which means that you have to do custom duties and those kind of.**

P1

We've got FOV arrangement and the customer on the other side is doing the shipping the sea fright and shipping and so on.

I2

**So, yeah, couple of questions. So in this case, how does it's a sensitive question, but I'm still going to ask. How does price structure works? How much do you buy from farmers how much do you sell for?**

P1

Depends on depends on what are you paying for the charcoal and the supermarkets. Factors coming back from that side, so the tenders is going to put out like for ALDI the example, ALDI is putting a price out and then they're saying price discussion is coming there and then the price is going down to us. So clearly, clearly you say we are price takers.

I2

**And with respect to the farmers, do you have like a fixed one or do you have like a variable price is like is it like per tons or is it like per tons plus they get benefited if the charcoal has a very high calorific content or something. Is it a variable one or is fixed?**

P1

OK, we've got a fixed price. The bulk price but we implemented it now this year that if they are screening it on the farm the charcoal is more cleaner. Then we give them a benefit for that. And then we are also checking the moisture. The moisture especially may not be over a certain percentage over 6 actually 8% if it's going over 8%. Then we have to dry the charcoal again, so then the farmer either is going to fetch it here and dry himself or we dry here and then we charge him for it.

I2

**And with respect to arranging because it's all about the numbers, right? And so you get the quotation for the certain number of quantities you have to export, and you arrange for the farmers. And in this case it's 20 or 25 farmers. Do you face any difficulties farmers not meeting with the quantity?**

P1

For example, you the farmers are quoting me now, they are they are sending. Like for example 1200 tons. I make my summary and I see they are sending 1200 tons a month. I get in total and then I quote actually that I am for my budget. Actually I'm quoting just for 1000 tonnes because there's also, for example, one time I decided no, he's not going to take anymore 10 charcoal workers. He's only taking five or the next one is saying. He's done 10, 15, so it's you don't have a continuous flow. On the production side. It's very difficult now in the rain season for this year. It's a lot of rain. So the farmers are not producing actually very much. Next year, maybe. We've got a drought and then all the farmers are saying you can. You can come back. We can produce full steam, so we cannot make a plan. It's every year is a new year. It's very difficult to have a really continuous planning to say every month is coming in. We've got about 70% of our producers, they are very constant, very constant, yeah.

I2

**And you said you work with long term contracts with farmers, right? So that's like. It was like 5 years 10. Years or like?**

P1

Yeah, we make a contract actually with the FSC with them that they that they are going that they only may center charcoal that we are paying for the FSC levies and everything and then the farmer is connected to us actually to sell the charcoal. We cannot block him if he wants to sell it to somebody else. We are not in the structure. We are not allowed to block him in that in that direction, but we make.

I2

**Why not you can still if you have a contract you can?**

P1

Yeah, it's very difficult, but we don't have this scenario actually we don't have we try to have a good relationship to the farmers producers and to all of them and we don't have actually the problem some of them if we say if they are going over that production for example if they suddenly produce. Like 200 tons and they only quoted 100 tons. Then I say this month I cannot take so much. Then I give them a letter they can sell to somebody else and so on. It's a very open process.

I2

With respect to the transport, because you said some are also you work in the radius of around 180 kilometers average, but some are around far so who pays for the costs.

P1

We are we are doing the transport.

I2

You go to the farmer, take it and then and I assume you do that in the 32 tons carrying trucks?

P1

Yeah.

I2

**And once I bring you back to the question, so rough figure of the price, how much you sell and how much you buy from the farmers, do you think you can provide that ballpark? You also tell it in percent if you want. It’s up to you.**

P1

With all that, it's actually more than double the price that we are buying from the farmer, more than double the price that we are selling. If I can take it like that. But we have got all the transport shipping and so on and so on. So there's a lot of costs in that one. The margin percentage depends. It's a lot of figures that you have. It's just between 5 and 8, 10% and that's that is the margin that we have. So actually, yeah.

I2

**And I was also wondering like how do you see this value chain or this business for the next upcoming 5, 10, 15 years. So you think if there is still a steady incline because the dynamics in Europe for the moment, there is a rise in the charcoal demand. But how do you foresee this I mean is this. I think this will still grow on this.**

P1

The demand in Europe is there. So you can sell the charcoal actually very easily, but I'm not going to more contract because I'm very, very nervous about the shipping lines. So the volumes are here, but you don't know I'm. I know that volumes that I have at the. Moment is I can send out it's that I can calculate this. I will get the containers and so on. I can double up my production within one month. Call it like that, double up my production in one month. I am. I've got all the facilities here, everything is fine, but I don't know if I get the containers, the space on the shipping, so that is the biggest problem that is actually the bottleneck that we have at the moment, shipping. Shipping lines and we are not also in like the Namibia is not in a very because of we have got only about 3 million people living in Namibia it's not a big population and so on. So the harbour is not so. Big so you are not coming so much ships in. So if you are we are sitting like for in Durban or backdown and so on, you have much more shipping lines, much more opportunities to ship out.

I2

**And have you ever considered moving to that port via road and then you can still send it out?**

P1

If you checked the last year. What was happening, especially in Durban, South Africa, was a very positive. It's a very high risk to take it down there. To South Africa, especially to Durban this area, there's a lot of. There was a time that, especially when you when they saw Namibian trucks, they were burning trucks down and so on. So your risk taking it down there was very, very high. And you've got the there was strikes also in the harbour so. How about? I don't know how long production was backlogged and so you don't get space. So I don't think it's. The opportunity to go to South Africa, I don't think at the moment.

I1

Maybe we can show you the stuff that we're working on. It's called the Biohub, and the idea is that here in this area, there are multiple farmers that provide the biomass. In this case the Bush to a biorefinery, and for the biorefinery we are investigating a technology that can produce 4 Outputs the main output is a bio oil that can be upgraded and used for example in the shipping industry this we are focused on, but it can also be used for other purposes. A second stream is a biochar, and that can be utilized again in this area like as a fertilizer or water purification. Whatever the need is and then there is a wastewater stream and also a gas stream that can be used in the same facility.

P1

**The bio oil. How was that one produced?**

I1

So yeah, that's a technology called hydrothermal liquefaction, and I think you can explain it better.

I2

So it is very similar to pyrolysis, but we call it pyrolysis. You put the biomass, the bush, water, high pressure, high temperature within 15 minutes. Yeah, you get 4 products, you get a solid. It's biochar. You get by oily face. That's bio oil. You get a water stream content as well because you use water in the front, the aqua stream, and you get off gas. Yeah, it's like a pressure cooker.

P1

The gas of the charcoal itself. If you burn it and take the gas out.

I2

You predominantly connect with and you can still burn it within the facility valorize them. You can pretty much valorize the off gas stream. You can valorize the Aqua stream because you still need water for the process. You can or you can still keep water also contains some organics. You can still utilize that to produce more value added chemicals if you want and then the bio oil is our prime importance. So we will upgrade that and then use it for ships and then biochar based on its properties, it can be either same for a soil amendment as a fertilizer, or it can be still burned for producing electricity, or it can also be used as an activated carbon for carbon filled like water filters and things like that. But the thing is, we don't know yet. So right now we're doing. Also we have another pulling running. Experiments based on bush and. So on and so forth.

P1

**But there's no factory at the moment that is running like this?**

I3

This there is one.

I2

So that is one, but not based on Bush, but based on forest residues like Wildwood and. Thank you. In Europe. OK, the forestry also in Canada, once again forestry and those kind of things, but with Bush exactly, yeah, no.

P1

**So you need charcoal to put it in charcoal. Do you use the bush?**

I2

We need the bush.

P1

You put the Bush inside. And then you burn it, yeah.

I2

High pressure, high temperature. So if you basically cook it. And then you get these kind of things. So the idea is that right now based on what we saw is that one of the major thing, all the value chains currently existing in Namibia, right can be charcoal or pushed to feed or fire or anything in or even producing the fiber boats. Everything is small and the numbers even do not even match up for the regrowth of the busg. So pretty much there should be a value chain. We can consume a lot. We think this could be one of one of the ways because shipping industry consumes a lot of fuel. Ships are big, ships are big they need a lot.

P1

**What is it? Do you know what is the percentage? For example, how many tons of Bush do you need?**

I2

And to produce the bio oil. Yeah, that is something we are working on and not the experiment. Our colleagues right now do. Roughly based on other wood, other things we don't know. Once again, we don't know anything about bush yet, but for other things it will be some somewhere around 20 to 30%.

P1

Of the tons that you are putting in that you can use for oil?

I2

That is just one of the products you can also use other products for other value chains and those kind of. That's right. And if I remember correctly, the charcoal is also pretty much the same yield right. If you burn 3 tons of wood or something.

P1

It's yeah, it depends on how you burn it. Yeah, actually, if you use the retort or something. You get 3 to 1 out. Yeah, if you burn it like the most of the farmers are burning and burning it in a killing in a small thing then you get one to five. So actually it's very.

I2

That's the thing we are working on right now. So but then once again. This technology is still in. Its adolescence. It's not a fully commercial, but people are really working on it. The big companies are also interested in this one. Because one of the major things you mentioned, not only for charcoal, for other biomass value chains, is that you need dry biomass. You have to drive and drive. Is that either the most time consuming step or the most energy consuming step?

P1

Especially in Europe.

I2

Yeah, so, but in this process, because we use water, if the moisture content is present or high, even 50 as high as 50 or 80%, it still goes, it can be used.

P1

So it must be must it be crushed or chipped in small pieces, so and then wood chips.

I2

**Wood chips because that is better for all the conversion and those things, it's the big log. Once again, it's like putting a big. Carrot and. Chopping of carrots and then, yeah, obviously get better. But then so for this, we want to understand what are the difficulties so far from the value chains, because this is as I said. This is a big value chain, which means we are talking with. Lot of bush spread across a lot of areas. So my question would be if you want to expand your current business, so basically upscaling right. What do you think will be the major challenges, whether in terms of what I want to understand is that what are the difficulties like, is there a technical aspect or is it what kind of challenges do you expect for upscaling business?**

P1

If you call it in that in that aspect actually, especially for this to use to use a bunch in in for bio oils. Actually the expertise that you. Need for the technicals and so definitely. That will be the biggest challenge that we all have, actually.

I2

**And with respect to transport or getting the products availability that you know that?**

P1

It's very expensive. It's not easy, unfortunately, Namibia or actually in the world the most if you calculate the transport on the back of charcoal, I don't think you will buy any more charcoal, any product. So on any product that you actually take the percentage of transport in every product is so high. Yeah, and a lot of businesses you are concentrating more on the transport business. As on the product itself, so the transport is a very, very big aspect.

I2

**And also maybe I should have asked this question earlier. Why charcoal. Like, why? I just want to understand why charcoal.**

P1

I think it was actually when we started 2013, it was actually. We did had the we did had the market already, for example in Europe, we did have the market already and the guy that had also a factory here where he was cleaning and packing. And so on. But it didn't work and then then he said he would not want to go on and then we met him like. Somewhere and he said no. He wants to sell everything and then we start talking and then we start. We did also produce already on the farm. I was also before on the farm, and then I'd also produce charcoal on the farm and then this guy said, yeah, if you want, I have got the market, you can just process the charcoal. So it was a very easy start for us actually to start up because we had the volumes, we had this market ever since. So it was very easy for us actually if you call it like that and. We did so with the charcoal, especially a lot of opportunities that you can get actually for the farmers especially to get rid of their the biomass on the farms that they can use in their able to keep more kettle to get the open grassland thing in for the for the wildlife and so on. Because Namibia has the biggest problem, actually, is the Bush on the farms, actually, that's the biggest problem the bush encroachment is so high and so the farmers got to use it actually to. For example, they're using herbicides and so on, and also mechanical to take out the bush and it's so. Expensive, but now at least they get something back from charcoal to do charcoal get something back. And the charcaol market that grew over the. Last 5-6 years a lot. A lot of farmers. The first thing in the droughts? The farmers climb on the charcoal. It's very easy for them, they only need. Like for example for the workers houses. And the PPE and then they need killings and then they start up. So it's very fast. Now the cash flow that you are getting in is very fast, so. Two or three loads, you've got your expenses back from the killings and so on, and then you can produce and get something back to the farm. And a lot of farmers did see that, it's not only good to only be on to only be on one lake if you call it like that, only cattle only hunting or only agriculture. So they decided to spread it a little bit, they're doing a lot of more things and another big thing also is on the farms with poaching and so on the farms so that I saw on my on the farm where I was. If you've got the charcoal workers on the field in the field, the poaching will go down.

I3

Well, we've heard a lot of complaints that it goes up.

P1

It's vice versa. Look, poaching will be always there. Now poach you don't you will not get it back. I'm saying it like that if you've got, if you've got 20. Workers on your farm. At least that you've got less poaching in direction for your cattle. Especially because the workers are always around on the farm, or in the part of the farm and then they are actually protecting also your cattle a little bit, but the poaching. They are very easy tools. To get your own workers, not to poach. Very easy tools. And then they protect your actually protect your wildlife or wild animals there. But that is actually my. It is when you've got more people on your farm than they will especially. On small animals for the. Yeah. Smaller animals or birds or something. They will poach on that one. Actually that will happen. But you don't have got any more other people on your farm that are poaching not so much. That is my personal meaning.

I1

**And you mentioned some tools easy tools?**

P1

Supply the meat actually to get it, make it easier for your people to supply the meat on a regular basis and it's going about meat actually that is the biggest thing, so if you supply the meat on a regular basis to the to the charcoal workers especially than they are. That's much more easier, but you will have always poaching you don't you will net. You will not get it away totally. It will be always there. It's unfortunately a big.

I1

And yeah, how do you see this this concept and also in the context of Namibia?

P1

I think it's very interesting we are also very interested especially for the biomass to get the new opportunities or new businesses and so on and so on. So we are very, very interested in such things. So make a call if you want to. Make samples or something. We've got a big area here where you can use it or maybe make some tests or something. We are very willing for that one. So we are very interested in to not only produce charcoal as well as other products for the for the industry. So we are very willing in that direction. We tried also to take the gas. We have got a gasifier here, yeah. And but it's not working so nicely. I must put it up again. But I can show you maybe know a little bit more about that.

I2

**And do you work on like? So how do you keep yourself or say on the toes about happenings in and around the bush? Do you work with academia, or do you work with other industries, other value chains or competitors?**

P1

We are very good connected to Nbig we are getting a lot of also from knowing what's going on there quite a little bit connected to them to the kayon and also in the industry. Hear what is going on at the moment with the biomass, there's a lot of going on actually, especially with the wood chips and so. On so, it's also for us for the charcoal industry, for BBQ. It's a little bit too dangerous that we will lose some markets as well and so and it can be as well. So for the future next 10 years. Charcoal, I don't know, will it really change or will it not change actually, maybe. Would it change a lot, I think. There's still first we have the BBQ change in this direction, so it will be very interesting to get more into other biomass areas inside that would be very interesting, actually. More interesting to not only be on one lake, not only on the charcoal BBQ market. We are trying to we are trying also with the wood vinegar. The wood vinegar is also a very nice interesting. I don't know if you know wood vinegar. It's also a very nice by-product that you will have from the charcoal. It's very easy to put up and to get wood vinegar from that.

I1

**And do you see like there are possible negative impacts from this from this new system?**

P1

Not really. Not in the first step. I think especially a small country like Namibia can benefit a lot of that one to get something like this running we get money from overseas and so on will be a very good also for the people, for the working conditions and so on. So I think it could be a very opportunity for the country as well, and especially. For using all the Bush at the moment. The charcoal you only can use this sizes and there's a lot of smaller sizes that you can use for this one actually where you get much more. There is if this this project will run more and more and they will. The that is the thing where I'm worried about personally, especially for this company to maybe in 5 to 10 years, how are we going to stand in there. But we must look for new markets. Like that one. That is my thing, that I'm thinking that we must do actually for these opportunities that are coming up, especially to look other opportunities to use the biomass because I don't think we will have so much charcoal producers, maybe in 10 years, I don't know if something is coming up like this or the other biomass projects that are coming up and I don't know how charcoal will stand then, I don't know.

I1

**And we would also like to understand a little bit more about different actors involved. The actors that could play a role in these concepts and the relationship between them and we put them on these plots like a power interest grid. So if they would have high power, low power, high interest, low interest and see, I would like to ask you how do you see these grids? Do you agree with these positions? Should we change something? And are there maybe actors that are missing?**

P1

I think the government, especially the government and the marine industry, are so the shipping lines, but.

I2

Maybe just for a clarification maybe here. The power indicates their ability to do something they want to do something.

P1

They will do something, especially if the marine, but they will only do it as the benefit is there. If they get the cheaper product. Then they will then they will go for it so. I think, and especially in the Namibia the biomass, it can be structured on the one side, but to get all the biomass to one place, and I think that is a very big challenge. That is a very big challenge and also the technical Support on, especially if you're doing like something like this, then you need bigger machines and so on, and they're on the technical supply and maintenance and that one. Is also we saw in this direction we saw a lot of companies coming from, especially from Europe, coming to Namibia to want to collect the wood actually or the biomass. And in Europe it's very easy to have a biomass machine for example, for those crushes and so on. You've got the stripe straight, very straight bush or something. Yeah, it's very soft. Yeah, it's not so Sandy inside. So I think that will be at the beginning a very big challenge to get your machinery correct for especially for this quite rough area or land or if you call it like. That would be not so easy. And maybe you must listen a little bit there was already a lot of people that were bringing in machines and say they can produce like that and we are standing a lot of machines around and not working anymore. So it's a challenge with the bush. The bush is hard.

I1

**Because the farmers that supply you they do manual harvesting?**

P1

Yeah, they are. At the moment they are doing manual harvesting. On but there are also people that are doing this on the mechanical base where. They have machines. Get these machines that are cutting and grabbing and throwing into the machines for crushing and so on. Yeah and yeah. It's a very big target, actually for the for the for those guys to get the great people working on the machines, the maintenance, the material, this pushes very hard. But on the other side, if it's very hard, I don't think it's if it's if you get a better product out of that one. For charcoal especially, we get. We get a better product out of if you compare it to the. Too pine or something else. It's a very heavier, much longer glowing charcoal than we have actually, so I don't know if you get much more when you press out the oil. If your percentage is going higher and if. You get it harder and I don’t know what that benefit would be.

I1

And where would you put your company in this plot?

P1

So we will be more the bush processors actually. So you have got the biomass on the farm, the biomass collectors and so on and the bush processors in this one for us especially the transport is the biggest thing that we have to transport. That will be the also much more expensive and so on and then the. If the thing is running to get the production. If that depends on the need that you how for example the shipping lines need the oil and. If that one is flowing very fast, then it's easy. If you got all. The things the containers and so on and place then it will be very much more easier. And The thing is we must. Actually, for the biochar, we can use it for the farmers. Again, that could be also a very interesting thing. But we don't have a lot of numbers in Namibia to sell all the products, so we must export it.

I2

That's a very good thing. You don't have a lot of people to meet the demand. So you can easily satisfy the national demand and then you can export.

P1

It's very good.

I1

Do you have any last questions?

I3

Just had one think the forestry once said that you needed transport permits for transporting the bush, do you also need that for the charcoal or not?

# Part 2

P1

The transport permit, as the farmer who is producing on the farm, he's doing his own marketing, harvesting and transport permit. And yeah, that is for his costs. And we are doing again our marketing permit and our export and so on that is on our side.

I1

**And also just question, so you said that sometimes you store right because to understand the there's fluctuations and you are throwing charcoal sometimes. In a dry heat. Isn't that a safety hazard? In the dry in the dry heat because in summer get can get really hot. Get really hot, right? So 3000 tons in the same place can get.**

P1

You know that actually charcoal can ignite himself?

I1

Yeah, and that's that.

P1

Yes, but not bigger pieces. Actually, not the bigger pieces. If you screen it. If you keep it like it's what I can show you quickly there at the back of if you check if you check the smaller pieces like below 5 millimeters, these below 5 millimeters when you put it in the big height, then it will stop. Moisture is one thing that you need moisture and then especially heat is always coming in October, November and this sand and ash is starting burning. It's every year at the most of the factories actually that have that problem. But at the moment we don't we stored actually that's also we don't store the bulk we stored the bulk bags. So like in a cubic meter, 1 cubic meter, we store it and this cubic meter is very unlikely that it will start burning. It's big hypes, big hypes that you need. And we did also had here and then we did sell a lot of this fine start. Of the 1st 5 to 20 millimeter charcoal. We did sell to the cement factory and then we did put it outside in a big heart. Then we don't have to store it in bulk bags. And if there's only. By mistake for example, they did throw in one bag sand of ash. They started and there's a little bit sand of ash in there, a little bit moisture starts burning very fast.

I1

**So to avoid those things just here, so you also do give safety trainings to the workers?**

P1

Yes, yeah, yeah. Yeah, that's always part of the BCI that we actually are doing that so. We've got our fire drills we've got more time, I show you thousands of documents.

I1

When I when I was coming here I saw heaps of papers.

P1

Yeah. That it's also very important, actually, that the people knows what's going on. If there's a fire and so on. So for the company, good, if the people knows what they should have been done what they must do with fire.