**G4 - Interview dtp. director Forestry, MEFT, Windhoek - 13-2-2023**

Could you start with a short introduction?

My name is [name]. Iam deputy director for division Forest Management. I am under Ministry of Environment, Forest and Tourism. I have been working at the directorate for over 23 years now. My background is forest science honors and then I did my masters in forest economics. And I have a lot of leadership skills, trainings in wildfire management at the advanced level and lot of conflict resolution training.

well, we are interested in the encroacher bush and seeing if you can make new value chains out of that. And we've been talking to many stakeholders and one of the issues that they also mentioned is the management, sustainable management of that harvesting of the bush. So yeah, from the forestry perspective, what are your experience with that and your challenges that you face with that?

Encroachment has been a challenge for many years. The original cause of bush encroachment is very unclear. Let me say that because some believe there was an absence of fire for a long time and because of that the bushes encroached due to the rental management. And as far as we are concerned is the productivity of the rent slims are becoming lower and lower because of there is nothing left as the whole area is encroached by the bush. Therefore, few more, let's say decades ago. Few years ago we realized that we need to use Encroacher Bush as an economic source. And it's why now, instead of just leaving it on the ground, we encourage the farmers came up with the initiatives to embark upon charcoal production. And while they are only doing charcoal with the new technology, you can see that they shifted now to the wood chips, to the biochar, to the brackets to compress the charcoal. And recently we are dealing with the bush feed for the animal. The estimated area which is infested by the bushes is around, initially it was 30 million ha, but there are two figures we are talking about 45 million, 30 to 45 million ha are infected. But what we see is that there are so many clearing of bush to convey the ##[03:54] charcoal in other products and in maybe we need also to look at the current threshold of the area where the extent of the area which is engrossed by the bush. Now as a sustainable management do not bush. Namibia is divided in three parts is a savannah, is a woodlands which is very small and then we have a descent of the succulent and savannah is the biggest where we are experiencing bush encroachment. I think about 60% to 65% is under savannah of the land area. The land area, you know, is two is about 82,000 million hectares and yeah, you can easily conver tto get the size and savannah. For the director of the forestry, bush encroachment, We are the regulators because most of the bushes maybe if you can remember they come on private lands or commercial areas. Commercial areas about 30 35% of the arable land and about 33% is the communal area. There are some pockets, small hot spots in communal areas where bush improves occurring. But in communal areas we don't, we never allowed land clearing for charcoal production because it's a commonage and everyone is using the only areas. We are regulating charcoal in which encroachment is in communal areas, in that it's owned by few individuals. We issue them permit after we do the inspection of the areas and if we agree with what I said and we also prescribe to them with other species which encroach your areas. But then we must know that there are also some trees which are protected species which cannot be detached. Like arioloba, maybe, you know, camelstone. Camelstone is like protected. Indeed. You see also the shepherd tree. We have seen.They don't touch them. So we protect them even if they clear all their species. Then if we leave those ones which are protected but you can see, like the Mellifera semicalia and the black thorn, those are the most common trees they used to remove because they are the ones who are encroaching their areas. And from our site we do more regulating to inspect to ensure that they get the harvest impairment and then also the marketing and the transport or export. The other thing also which now come in to assist us because of the resource wise and so on. We have our offices all over the country, but also resource wise, like the manpower and transport. We cannot be everywhere. All the farms, if we just talk about maybe Okanja, Otjiworongo so each of those forest offices are covering more than 500 commercial farms. And then you see that there was a lot of delays, lot of delays in inspecting these areas, which leads also to the illegal activities. And the illegal activities are common because they are of the harvesters. Most of the harvesters don't follow the guidelines of what size of trees to be harvested. We only allow trees of diameter less than 18 centimeter. Anything else? If there is only more than 18 centimeter, then that need to be approved from the director. And there is also annual yield or quantity allowed harvestible quantity annual, which is about 500 tons of food. I think about a ton of charcoal is about four ton of food. Yeah. So it's massive trees to be cut for one time.Yeah, yeah, but then we only allow 500 ton anything after that the same firm they need to apply and they will get the approval from the director. It's only the direct applicant forest act because I think that you have been hearing about Forest Act of 2001, Number Twelve Amendment Act is 2005, Number 13. But it's only the change of the minister in the name of the ministry where we assisted from one minister to the other one. Then the other thing also is we also have Forest Regulations of 2015 that will help us now to enact, enable us to execute our act. That's the reason. And if we talk about also the monitoring now due to the challenges I said, like the man power and transport and so on, then maybe the FSC and CMO, you hear about that. These people also are helping us now. They have their members and they are very useful because they are also jointly working with forestry staff so that they can go out and also inspect the areas and look at the compliance of the resources and how they produce. The other thing also is now I think it's more than close to 13,000 workforce on these different farms who are doing ##[10:46] most of the time also you will realize that most of them are also they are not having documents to prove that they are national. But currently now we are dealing with an issue where we need to come with immigration to give them temporal kind of permission so that they are legal on the farms. The other thing also you will know that we are about number six producers of China. So we export, you know, to Europe, US started now and a lot of it is going to the Asian countries because the Asian countries can take any equality, okay? So it's very easy for farmers to get from them. They just come to the farm and they pay and they collect and they go. And we have realized that some of the species also which are not encroaching like terminalia prunioides, the Asians like that one. And also the method, they are different type of method. Maybe you saw also if you talk about chaptel, they just ##[12:15] bend in the ground because you can, because that one is like the way they bend is more solid than you bend in the pot. So those are the other things which are coming by. But to continue on, your question now is that if we talk about biofuel, we have product, we have seen on the commercial farms, there are a lot of people who have product and these also resettlement farms. Maybe this is a 99 year lease.This is a farmers, those of the former government now with independence. We now resettle Namibians in groups and these farms also they encroach. We are currently assisting them with to harvest also because of smaller communal areas. It's like individuals getting a chem maybe of 1000 or 2000.Those ones we allow. Okay, so those are one of the stakeholders maybe someone can look at. But these resettlement farms, they don't have resources. They were awarded these farms to farm. But most of the time, you know, the criteria to award these farms is more formally disadvantaged. And some of the people don't even have resources to work on their powerhouse or to farm or to improve their fencing. So most of the time they don't do anything.They don't improve their range land. And the encroachment is just getting worst and the productivity of the land is not very low. So they can have many cattle, but there is no grazing because of the encroachment. Yeah. The other thing I think with that is the laws. There is a second law also Environmental Management Act that's under our sister directorate,under Ministry of Environment, Forest and Tourism. And they also do know there is a provision that any area above more than 150 acres will need a clearance certificate. And because of that, now what we are currently doing is to, we work with them. So that's Environment Ministry is our ministry and they are under directory to Environmental office. We work hand in hand. The inspection of their sites are also done by forestry officers. Anyone who is doing the clearing. Suppose we have a clearance certificate, it must be an EIA or a Scoping report to see whether they can do a full EIA and they will be granted the environmental clearance certificate. And so those are the two more common policies and acts we are working on to manage forest sustainably. Other than that, the other thing is a rehabilitation of the site after clearing. Maybe you have seen that this is a problem. Maybe you spoke to a guy called Michael Dieke. Michael Ticket is a guy, he's a manager of Charcoal Association and maybe also discuss about the rehabilitation and it's a problem. besides that also we also have some guidelines during the fire system whereby we only allow communities to do charcoal when they have fire breaks. They need to have fire breaks, they need to have a central burning area. It's how we also reduce fires because there were a lot of fires. Most of the farms burn down because of the way they are doing. Yes, I think maybe then you can follow up, maybe if you want.

**Yeah.I was wondering what happens if a farmer harvests without a permit or they don't meet the requirements? Is there a fine?**

Yes. The forest actually regulations, they have fines, they have sport fines which are approved by the magistrate. So we use that. And the other thing also there are cases if you find someone, you confiscate and those products become government product and they are optional public options.Okay. Yes. So it's very street if someone will always encourage people to have payment on their site. If you transport unity of trans got payment on a truck. Or if you sell, you need of marketing. Or if you harvest, you need to harvest, it must be valid if we not valid them, it's illegal and we understand.

**the permits, they are valid for three months, which is based on the charcoal industry, right?** Commercial loans. Yeah.

**Is that the same if you produce wood chips, then it's also three months? Or are you looking at if it's for a different use?**

Do you know what's happening now? I had an issue other day. Wood chips currently is just under chapter and we just follow the same rules.Yeah, okay. Because I have realized I went for a meeting Otjiworongo. You must be aware. Just before Otjiworongo, you have seen when they are clearing these big fire breaks of gut lines along the fence. I met because of the power lines and also the safety and so on.There's a lot of poaching, you know, they came from US in that's when they make those broader things so that they can see. All of these guys have these CCTV cameras. They are about 15-20 km away from the road, but they can see. Now their wood chips are running every day. But you will realize that the staff members sometimes don't regulate and monitor. This guy will take one payment. One load is one payment. But you will drive the whole week or the old one if you don't check it. So I met one also.I checked, and the payments already expired 14 days, but he was still driving. And then we need to charge it. So when we charge him under charge because he has the same product. Okay. Yeah.The only thing, the technology is the same product.

We also understood that in the communal areas they are currently not allowed to participate in at least in charcoal production. But then it depends, like if they are in a community forest or in a conservancy. So are there already communities in communal areas that are producing charcoal? What happened? We tried a pilot in the conservancies, three conservancies,##[20:30] as you rightly said. We gave them three months for harvesting, but they could not even produce five tons at one time. There are so many reasons why it happened. They were just looking for big trees. Encroachment. You must also understand your idea is good for biofuel. But if we talk about your, then if you come as an encroach area, then people just look for big trees and you will ask the guys where it shows what you are doing. We are doing charcoal. You look, but you cannot pass through. Because the areas some will be behind with a big reason. Okay, so those are the things and we tried that was a pilot and they could not deliver. Even NBIG was also part of it. I think they are the one who gave them the equipment. But they could not manage after three months. I think they were only maybe 15 or they could not even fill up one truck. Many things happen because in communional areas it's a grazing area. And you must know also that this trade of charcoal is only a certain group of people. Even manual becoming difficult. But then you cannot just bring in machinery like wood chips. They use machinery in it. Yes. If you go from windhoek after the roadblock, you will check them. Those are the wood chips. They have this big machinery which can just pull trees and then crash. They brought them to Breweries for the heating and also at the cements, you see them, Ohorongo and ##[22:39] they use them for that. The permit is just the same. But the communal area, there's nothing conservative community forest also we don't allow them. You don't allow them? We don't allow them. And what should be the conditions to change that? To change that law for them to produce community forests and conservancies? Let me say that most of the community forests and conservancies, the India woodlands, woodlands like, you know this, it's called ##[23:19]. woodlands, like, you know those big trees, ##[23:29], teak and amelanchier, rosewood, namibia at the edge of that is going up on Cola and so on. Yeah. So now those areas, most of the conservancies are there because of the conservation of the white land. But we also have conservancies in savannah, we have them. And this is the area where we started to dot he pilot, but the things could not wake up. Currently there is another art again, I think the consultant started already to look again and see how better what will be the governance structure to practice this type of idea in communal area. I think that will finish in June and from then we leave guidelines to see whether we can implement or not. But genuinely, there are areas full of bushes also in communal area. But one thing also we need to know, even when we did this pilot, you must know that communal areas are also fenced. There are so many people with fence of the areas. And if we talk about communal area, if their size is very small because people have fence of big areas, so the individual families and it's very hard now, if we talk about harvesting in communional areas now, are we talking about this block of individuals or are we talking about which area? We were about to embark upon a conservancy called ##[25:36]. But what we realized, we wanted to give them now they are cassetted area, it's a community forest. And we started now to give them some activities so that they can generate income. We started to say, okay, they can do boost feet and poles and trophies and fireworks. But it happened that there was nothing outside in the corridors. All the products were in defensive areas of individuals. So that was a constraint to implement this.

Okay, so only a few individuals were participating.

No, the reason is why we realized that to implement in a communal area, it must benefit all the communities. But it happened that only guys, you said only individuals. Only some families and the whole community is excluded. The same thing also happened with the grazing. Once the areas are fenced off, then the access to the grazing is becoming to anything for domestic use, defensing material. Communal people are now not having those resources because of this fencing over these areas. And then if we start things like the wood chips, charcoal, then it will happen that people will not have those resources for their domestic use.The reason behind this why we dont allow.

**I think we have to visit the Bush to Feed project in those areas, are you allowed Bush to Feed programs?**

Yes. Because that one is just taking your ##[27:40]. I think the argument was consuming the whole reason it just sustainably taking some leaves on that and in process. But that is also regulated. That is just a pilot. It's another university name. So they need to come up with the recommendations, guidelines if we want to take it further.

**So one of the conditions for changing those regulations is like a successful pilot or governance in the communal areas.**

Yeah communal areas, conservancies and community forests

**And you said that there is already a new project for new pilots or consultants working on?**

yeah, consultants work on the paperwork. There is no practical pilot. But they need now to come up with what needs to be done. I've realized that the consultants who were taking are the ones who were dealing with the commercial areas. So at least maybe they wanted to use that experience in the communal area. But with our pilot we realized that what happened was the guys I don't know, the guys were contracted to be overseers of the pilots. But the only thing was that the only thing was that they oversee they know how to do it, but they could not implement. The reason they were saying was that they wanted to become economic.They cannot just do charcoal for influence restoration.They also want to make more charcoal. That's why they completely fail to restore them. They were more looking for ##[29:36]. If you come there, which area is the area you were doing the thing and they will tell you no, maybe it's not a good idea because we need also to survive, we need to check. And that was mostly the issue.

**So the main problem was that they only looked for the big trees and not the smaller?**

Not the smaller ones you cannot use. You can use for your With bio-fuel you can use ethnic. Yeah, but not for jaguar. Jaguar needs a bigger

**and don't you think that that can be solved with education or awareness or training?**

the training, the issue was just like the economics. People want to generate money. You can go also to the farmers. Commercial farmers. Also, commercial farmers is only that we have restrictions to the bigger tree and also the quantity. We allow them pay annual quantity, otherwise they could have all destroyed their farms. Because we inspect before they renew their payment, it needs to be inspected and we make sure that it must be done.

**Do you also come in after it's harvested to see if it's done correctly?**

It's supposed to be, but the quality you said that we are in windhoek but we just get a report like the woodchips for Ohorongo. The one which was under NBIG, you know Mr. ##[31:27]?

**Yes.**

yeah.They came many times. We closed the place because it was not sustainable.The machine just came and cleared at the old area and they went also because all of us are staying in windhoek and if you don't survive, then many things fall. So when we get a report from our staff, local staff, we just close.They came and then we told them, go and see what's happening. And then they also agree.Yes, it's only that we told the others that not so, that's the issue. But since like that, all the new ideas can be tabled and you can see how better the resources are. They bushes are there. I think you also pick up as you go, isn't it? You also pick up so how much do you want?

**Yeah, so I can show you our concept. It's called the biohub. And the idea is that here in this area, those are communities or farmers that supply the biomass or the encroacher bush, or in the form of wood chips, for example. And then those are transported to here, to a biorefinery. And in this biorefinery, we are investigating a technology that can produce four main products. The main one is the bio-crude or bio-oil that needs a little bit upgrading and then it can be used in shipping, for example, but it can also be used in cars or other it can also have other purposes. And another major output is the biochar, which can be used again in the area where the biomass is produced as a fertilizer or maybe as water treatment or electricity generation, depending on what is needed. And then there is a wastewater stream, because this facility also uses water and a gas stream and both can be utilized again in the same facility. So yeah, we are investigating here how could this concept work in the context of Namibia, what are the opportunities, but also what are challenges and the volumes are, that's also still something we should investigate. But the shipping sector is of course a sector that uses a lot of big volumes. So it should be yeah, should be quite well.**

Which part of tree you are taking? The whole tree or how?

**it could use all the parts of the tree and it should be chipped.**

Smaller shrubs.

**Can also be used.**

Okay, you tried this model?

**it's still under investigation. And then we have a colleague in the Netherlands who's doing experiments in the laboratory. We have a sample from here. So he's looking at whether you can indeed produce this oil and what are the characteristics.B ut we don't have the results yet. So it's still early stages. We're researching it, but it has been used.**

But the hub will be based away in Namibia.

**Yes, so that's the idea that's in Namibia and it also is for internal use, for national domestic.**

Okay. It seems like it's promising, but your part is a social science, you said. What is your role?How do you indulge the whole process?

**Yeah, so that's why we're also doing all these interviews, to really understand what is the perspectives and what are the experiences so far of all the different. So we've spoken to commercial farmers, but also communal farmers, to the union. Well, to understand, can you incorporate that while designing this? So, yeah, we make some recommendations, and then my colleague, who's more the technica lcolleague, incorporates that in his design so that's the process that we take.**

from our side is to regulate and to ensure that the resources are sustainably done by seeing selective planning and ensure that the areas are not completely clear filled in making sure and also I've seen that also the FSC comes where you have seen that it's more on the well being of everything social, economic and environment. So it's why they come in and see what is the compliance. if we look at the well being of the workers, what are the facilities and so on and also to help us that these guys cannot cut all the bigger trees and also not the protected trees and so on.

**Because from that perspective, how do you look at this concept and also how to produce it for a big sector that needs large volumes? What do you see as challenges?**

I think the challenges the challenges you are facing is about the land class which you like, the communal areas, this is always a challenge but if you talk about the commercial area and maybe the resettlement farms then they think it will work out. only the communal area but it's not regulated yet, that will not work out. But all the others there is already a model. The only thing is now if this guy, if he is having a charcoal then biochar already started. You have seen it's not only bigger scale, no, but for that one biochar you use more of the fines, the fine charcoal that is a lot. I think the people are taking it to South Africa for the ##[38:15], Not the charcoal, but those around one where they compress oh yeah, compress those ones. So most of people are using them for that. So that is also readily available. Biochar is already there and if you look for a biofuel also I think you get. it must be from the commercial setup. As I said, the area is huge, the estimate between 30 and 45 million.

**Also maybe from the social part we try to see how can you include all of the different farmers also how can you include the people in the communal areas in a model like this?So do you see a way in which they can play a role the communal area?**

Because of these regulations they excluded all the levels from these activities of chapel and bush encroachment becauseof the category of the classification of the land the only way they can benefit is maybe the employment elsewhere on a commercial funds. But for them, whether it's a seven year community forest unless we are educated through a pilot, the pilot come and tell us this is the outcome, then from there we can take it. For now they are not a part of the production but it's a good thing they also have some pockets where this encroachment is but one thing is as I mentioned, it's not much outside. most of the area vast areas are fenced off by individuals. That's the issue.

**And apart from that, do you see other challenges?**

The challenges, because the challenges is maybe the distance from the harpa and so on. But you will set your place maybe correctly because the wood chips you have seen that we are studying with the electric generation in that one. Also, I think the plant itself will be in ##[41:12] feathered up from but they will only get their wood chips from the radius of almost 100 km. Anything outside that will not be a convenient. so the challenge will be the third of the operating cost. You need to have a place at the right place. You see that our train is not that active.

**We see the one from Otjiworongo to ##[41:44].**

There's not very many like in Germany. I was in Germany. I liked their train. Every second is a train. very embarrassing there are alot of trains, here you see maybe a second day, after two days. because the program also the population is very small year 2.5.Yeah, so those transport but the resource wise, the commercial fund and the resident funds but the other categories, they are not practicing that.

**And then lastly we would like to understand also the different stakeholders that would be involved in this hub and their position and the relationship between them. So we put different stakeholders on this grid and here you see the power, if it's low or high power to make decisions or influence and then here if their interest is low or high. So in this position we put the stakeholders where we think they have high power and high interest. And here we put the stakeholders that we think have high interest but lower power here both is low and here the power is high but the interest is low. So I would like to ask you how do you see this grid positions of the stakeholders? Do you think that's okay?**

Like this one? These are municipalities. Yeah, I think you don't a direct dealing with them.

**No, we didn't yeah,**

so like them I think commercial farmers are fine, these are fine. Regional council, regional government national government is fine,regional government is fine, this is fine. But the municipalities I think they need to be yet higher. They almost hire everything.

**They don't have high power and also not high interest.**

Yeah, they don't have unless they buy fuel, they can use the biofuel okay, yeah, they use because sometimes they also have land but that length they always rent out. They have a closer 7 km from the towns but most of the time they rent out at least and you realize that also the development is going in those areas so they are not more of the higher level. Okay, yeah know and so the interest let's see. Now these small scale farms are what?

Yeah, those are the farmers in the communal areas or the farmers, their interest is higher, but then the power is low. That's correct. Biomass collector. This is what?

**it could be a company that and pick up the wood chips from the areas for transport.**

Yeah, that's also correct. I think this one is quite high. communication platform. I think only this one can receive this. Okay.

**And do you think that there are stakeholders missing that we didn't?**

you were talking about the unions.

**Sorry?**

The union. The unions.

**Oh, yes, the unions.**

And maybe also FSC also maybe need to come here.

**High power and high interest?**

Yeah, with more like it really assist the compliance. They are more important also. Okay. and then the financing is from outside? was a technology provider, so the financing

**yeah, that's true. That's the one that's missing currently.**

And that can also be of the higher, like the technology provider. So you must also maybe check to that one.

**yes. Thank you. I don't know. Do you have any questions? Well, thank you so much for your time. Yeah.**