**Cultural ecosystem services and human well-being in Madagascar under climate change**

**WORKSHOP TRANSCRIPT**

**Location/site**: Rural commune Andovoranto, Fokontany Andovoranto

**Date, time**: 01/09/2019, 03:00PM

**Interviewer (initials)**: ORA + PRA+ SMT

**Length of workshop**: 01:54

1. **FORMAL GREETINGS AND INTRODUCTION**

The workshop started with the formal greetings and acknowledgment

Before asking the questions to the audience, first we introduce the workshop which concerns the nature and its surroundings. Also, we explain to them that their participation and ideas are very essential to us and for the benefits of this workshop**.** Then the introduction of the members comes after: She is Ravaka, he is Princy, he is Jan and me Sitraka. The four of us will talk with you all this afternoon, during this workshop.

1. **WORKSHOP IN GENERAL (DISCUSSION)**

As I have mentioned before, we will exchange ideas about environment and its surroundings and the nature in general. So, to start, let me ask you first,

Sitraka: What parts of nature/environment are very important for you/for the people in Andovoranto? The debate is open!!!

Everyone is allowed to speak even children, because they also have their own ideas and I will write your responses on those papers, so that everyone can look at them.

Whenever you did not understand the question, please feel free to ask me to explain more.

Woman: Could you explain more then?

Sitraka: Alright, concerning the important parts of natural environment…well let me start with this simple question then, what is environment or nature of you? That is the question to open the discussion

Man: Teacher should respond first because they explain that to kids

Sitraka: Do we have teacher among us here?

Man: Yes

Woman: Environment is the set of air, sea, clouds, plants etc. That is the definition of nature Sitraka: Does someone something to add?

Woman: Sun.

Sitraka: Yes, good! We can help her to give more definition

Woman: Water, every living creature and species

Sitraka: Everyone may have different view of the nature. Those definitions are hers, what about the others? After a few minutes of non-responses, please do not force me to choose someone to answer [laugh]. I’m just trying to make a good atmosphere, but we’re here to exchange ideas and your responses, opinions are meaningful to us. That’s the reason we want you to answer-back our question about environment.

Well, is there anything you can add apart from what is already said and written? Or do you think there is no more definition of environment? Does someone have something to say more?

Ravaka: Or we can reformulate our question like, what are the natural worlds that you see around here?

Young girl: environment is all the natural materials that we use for everyday life.

Ravaka: like what?

Young girl: All we have said before: water,

Sitraka: Does someone have another idea of environment?

Sir, young girl, young boy…come on!! Share your ideas

Young boy: forest.

Sitraka: Forest is part of plants, but it’s ok, let’s write forest

Young boy: Soil

Sitraka: Whenever you still have ideas, do not hesitate to share them

Sitraka: Ok, let’s suppose that these items are the environment in general, now let me ask you which one is significant for you, or what parts of them are very important to Andovoranto’s people?

Audience: Sea, Forest, Soil, Plants, air, Water, Human, animals and birds

Sitraka: I think you have given good ideas; all those definitions and ideas are from you. So, let’s try to look them one by one. First, if we will take forest, why do you think it is important for Andovoranto?

Man: Because it provides rain

Sitraka: Yes, another importance of forest?

Man: Source of income

Sitraka: Could you explain a little bit this idea of “source of income”. We know that everyone search for income, but what exactly stipulates forest as income?

Man: for charcoal production, for house construction

Sitraka: apart from those uses, why forest is important for you?

Man: for firewood

Sitraka: Another forest value?

Man: Forest is very essential as it is a shelter for some animals

Sitraka: could you give us some examples of animals that we can find in the forest?

Man: Wild boar

Woman: Lemurs

Woman: Guineafowl

Man: Snake

Sitraka: Alright. Those you have cited are the reason of forest importance, now I would like to ask, where can we find forest in Andovoranto?

Woman: at Andobo

Sitraka: Here is a map of Andovoranto Ambila, could you show us and point out on this map that place of Andobo please?

[Showing them the map of Andovoranto, Pangalane channel…., they take a little time to try to understand the map…then they point out]

Man: he indicates on the map the place where the forest is located. It is 5 km from here (the place where the workshop is done) to the North.

[We marked the place on the map]

Sitraka: Still we have those lemurs inside that forest?

Audience: Yes there are, but not so many like before.

Man: They are not many because of the forest loss. Before, at the forest entrance, you saw lemurs but now you must spend a lot of time if you want to see them. Sometimes you won’t find even one. Lemurs are not many anymore.

Sitraka: Well, now let’s move to another part of nature that you specified, “the sea”. You have mentioned that sea is also important for people in Andovoranto, so we want to know all the reasons of its significance

Audience: Source of income through fishing

Woman: It’s a kind of natural air freshener

Woman: Besides it is a source of food (fish, prawn...)

Sitraka: any other ideas?

Princy: Concerning the sea, do we have sea plants or sea animals which are specifically in Andovoranto?

Man: we cannot see the plants and animals because they are deep inside into the sea

Sitraka: yes you can’t find but have you already heard about?

Women: yes, like Whale,

Man: Sharks, dolphins and sea turtles

Sitraka: Now, let’s enter into another part which is « plants ». I know that forest is a part of plants but are there any plants that are very particular in Andovoranto?

Women: Coconut plam and English palms

Sitraka: What is the difference between them?

Women: Coconut palm is used as food and English palm is used as ornamental plant and food

Man: Rice (as plant) for food

Sitraka: Besides coconut paalm, rice, English plam, is there any important other specific plant in Andovoranto?

Women: Lychee

Sitraka: What for?

Man: both for food and for sale

Ravaka: Does Andovoranto produce a lot of Lychee?

Man: yes, sometimes we sell it

Sitraka: Alright, here we brought some pictures of plants and animals; we will show them to you

Princy: We will give you a few minutes to look at them, and then tell us which one of them exists/ or has decreased in number or has disappeared in Andovoranto? and which one do you know?

Which one did you see before and does not exist here anymore? Please mark the picture and tell us. Speak one by one because we’re taking notes.

Few minutes after….

Sitraka: Shall we have the list then; you can tell us which one still or do not observed arround anymore

Ravaka: The first question is, do those species still exist here or not?

Audience: Some species yes, some not

Princy: Concerning those 5 last species, are they useful and how do you use them?

Audience: they are good! For example the “mazambody”(Clidemia hirta) is used to release tiredness

Mampody (literally, it is used when you want your wife or husband return for good in case of divorce)

Zahana: used when we have something that aches in the hips. We boiled the leaves then we pour on the body

Hasina: They are used s as ornamental plant, or enclosure

* Summary of example of species which still observed or not according to the pictures

|  |  |  |  |
| --- | --- | --- | --- |
| **Plants** | | **Animals** | |
| **Still exist** | **Not observed anymore** | **Still exist** | **Not observed anymore** |
| *Dalbergia* | *Atelorinis pitoides* | *Calumna parsonii* | *Cryptoprocta ferox* |
| *Clidemia hirta* |  | *Tyto soumagnei* |  |
| *Rubus mollucanus* |  | *Argema mittrei* |  |
| *Hedychium Coronarium* |  |  |  |
| *Dicranopteris* |  |  |  |
| *Psydium cattleianum* |  |  |  |
| *Diospyros* |  |  |  |

Princy: Thanks everyone. Let’s continue the following discussion.

Sitraka: Well, I think we had advanced responses with the birds and animals section, and we think that you liked our discussion about species and staff; we appreciated to know the existed and non-existed species as well.

Let’s shift to water, more precisely, the clean water. You said that you have both sea and clean water here, so in what way do you use the clean water?

Woman: drinking water

Sitraka: is it from clean water pump or?

Audience: yes

Sitraka: do you pump it or..from which sources?

Audience: We pump it.

Sitraka: Do you have this kind of pump in each corner or house sector or is there any specific place for it?

Man: specific place with a source, a little bit far from the house

Sitraka: So, in addition to drink, what are the other reasons for water need?

Man: for sanitation, for hygiene and washing

Sitraka: concerning the “specific source/well” is there any cultural practicing around it or it is just a simple source? Like in another region or place, sometimes water is blessed.

Man & Women: Yes, before there was a source, like a pond in which our ancestors bathed in but it is not seen anymore.

Sitraka: Where is that place?

Man: in Ambinany

Sitraka: Did they practice some blessing or is it a kind of sacred pond?

Man: Not so much but that place is historical. It was the reason of the name of Andovoranto. Before it was Andevoranto, so with this historical pond it becomes Andovoranto

Sitraka: Princy, please show them the Andovoranto map for precision

Princy: Is it far from here or where exactly?

[Showing the map to the people…] It is 3 km from here. It does not exist anymore (Ambinany)

Sitraka: Let’s move to “the air”

Is there anyone here who does not need air?

[Laugh…]

Woman: Everyone needs it

Man: We buy it at the hospital [Laugh…] when people are sick at the hospital, sometimes we buy it.

Sitraka: you’re right…indeed it is not for free, but our subject here concern the natural element so…

To add these needs of air, let me ask you if here in Andovoranto, is there any specific place for leisure? If yes, does it still existed or?

Woman: Ambinany

Sitraka: what is the particularity of Ambinany then?

Man: Because it was immense. But now, it becomes a delimited place

Woman: Because of the sea

Man: Because of coconut palm plantation

Sitraka: Who planted those palms? Is the owner a local people?

Women: yes, a local one

Sitraka: So, that place has become a private one?

Audience: Yesss!!

Sitraka: Since when

Man: I think since 2000-2004

Another recreational place is: Ambila Lemaintso

There, people can do everything for recreation. No owner, no private proprety.

Sitraka: Another question, is there any sacred place here? If yes, where and how is it sacred?

Audience: Amborodamba

Sitraka: Something linked with tissue (lamba) or? For what reason people go there?

Audience: to make vows and wishes…

Sitraka: Well, is there any specific plant used for it? Because as you said, the plant is enrolled with a piece of tissue right? So what is the name of the plant?

Woman: Nanto, Vosirindrana

Man: Votsilana

Sitraka: Besides these plants, is there any other sacred plant used for that? And where exactly, can you show on the map please?

Man: 3 km from here

[People try to point that sacred place on the map]

Sitraka: Concerning the “Tsaborà”. On the road to come here, we’ve heard about this and we would like to know if there is a specific tree while doing tsaborà, or?

Man: It depends of the types of the tsaborà.

Sitraka: Well, what is then the name of the tree? Any specific one?

Man: Hasina (not the bushy Hasina but the big tree, kind of Rosewood).

We can find it here but it is rare

Sitraka: And how about the coffin? Is there any specific tree used for it?

Women: Before, it was crafted with a “Hazomboay”, but now it is made of Volo (bamboo)

Sitraka: What about circumcision? is there any plant you use?

Woman: We use the small Hasina for blessing the kids, and then we look for blessed water in Ambinany.

Sitraka: Alright, we have already talked about people, but during the Kingdom era for example, is there any specific tree that the royalty used? Is his house materials specific?

Women: the Tangalamena (another name for Head of the Village) use the “mpanjaka ben’ny tany” (literally King of the earth which is a specific tree belonging to the rosewood family) (Harahara). That tree is sacred. It curses to death when someone gets hit by it.

Sitraka: I think we have done each important part of the nature. Now let’s move to the change in Andovoranto, Ravaka will lead this part of discussion.

Princy: Well, I want just to know that, when we talk about Ambila Lemaintso, it concerns Pangalane channel, whereas we did not mentioned it, we forgot to share knowledge about it, so we would like to know how pangalane works for people in Andovoranto? In leisure section, or in trade or in transportation

Man: When we talked about Pangalana, we refer directly to transportation. Here, roads are very bad so we take the pangalane channel to go to Brickaville, Tamatave for trade. That was before, now pangalane also is getting worse and no longer useful. But it is still there as you see.

Man: The change I see here is there are a lot of people who build their houses with stone. No more houses are made with “Ravinala” (travellers tree)

Princy: Does everyone agree with this sir about the idea of pangalane? It is his own point of view but how about the others?

Woman: I agree, he told everything about the importance of pangalane. It was the way to go to Manajary, Tamatave for tradingand tourism. But now it is impossible

Ravaka: What is the reason?

Woman: because of the road, there is some unusable roads Ravaka: Before there was no problem, the roads were fine

Woman: yes. It changes very badly

Ravaka: Another change here?

Man: Concerning fishing. May be there are people that dare crossing taboos, so fishing is getting worse.

Ravaka: Can you explain, give us an example

Man: Well, before when we went for fishing, the sea was clean but now people sometimes do something bad to the sea (peeing or throwing their “shit”). Fish amount are decreasing

Women: Besides, there is the climate change

Sitraka: Yes, concerning that climate change, do you think it incites bad changes? It destroys the environment or?

Women: indeed, it makes the environment get worse and worse.

Man: the climate change is bad for us, for Andovoranto especially the cyclone

Man: When we have cyclone here, everything is demolished because Andovoranto can’t escape the cyclone.

Ravaka: How often is it here? has it become more frequent?

Man: To tell you, before there were a lot of coconut trees, we did not have to buy coconut, but now only few number of tree remain here because of cyclone

Ravaka: Well, it’s time for us to see the other section concerning the changes observed about the nature here. As you have mentioned, those items are very important to you.

So, how can you define the change? How this change affect in your everyday life?

Women: the changes make our life bad

Man: As far as fishing is concerned, the price becomes very high because the products are not as many as before

Sitraka: how about rice plantation?

Man: It’s also getting worse because of climate change

Woman: sometimes, the weather is so dry that no rain to water the culture

Ravaka: In what way those rice crop changes affect your life?

Women: The price also gets higher; sometimes we supply rice from Brickaville

Ravaka: Do we have another change? How about the forest changes? How do you feel about this change?

Women: Less construction materials for housing

Man: Heating

Ravaka: One of the changes you have noticed is, animals are getting fewer, so how that is touch you?

Man: no more birds to feed on rice (positive point)

Ravaka: Another change is the disappearance of Fosa (biggest Malagasy wild carnivore). How these changes affect you?

Women: it does not have any particular effect.

Man: But we can take it as food, we eat it when we see

Ravaka: The Tsiakoko is getting few too, how can this affect you?

Woman: It tastes like chicken, but now we do not eat it anymore.

Ravaka: How about the loss of birds? Chameleons?

Man: there is no impact on us Sitraka: Does tourist come to see chameleons?

Man: yes

Sitraka: So chameleon is good for tourists not for local people?

Man: Yes

Ravaka: Then, how about the “Vombona” (Precious tree)? the effects of its loss in your life

Man & women: less construction materials

Ravaka: How about the loss of Mampody (plant)?

Women: No direct effect on me, but I know that the bush fire is the reason for mampody and another species loss

Ravaka: what is the effect of water source decrease in Andovoranto?

Man: Well, it just remain as a history, we did not see and it is very sad

Sitraka: Those who are born later like young and kids did not see the pond?

Man: Yes they didn’t, even us as a mature person did not see it

Ravaka: For those who didn’t see this pond, do you feel so sad or?

Man & Women: So sad, because we wish we could see it not just learn it from history.

Man: One day, when I went into the commune, I heard some history that it was Andevoranto before becoming Andovoranto

Ravaka: How about the Ambinany which is getting private and smaller? The effect?

Man: We do not go there for recreation anymore, we are afraid to go there

Women: the street becomes narrow

Man: Before, when I was a kid during the cyclone period, I remember we left our cattle there for safety because there was no one sheltered there, we went there for refuge too but now it is not possible anymore, no place. Beside it is private now and whenever the owner caught you, you will have pay some fees.

Man: Even if it’s just a single cow. The owner pays fees.

Man: Sometimes, the place keeper wrote your name to the owner and you pay fees

Ravaka: Another lost species is the sacred giant Hasina, How is the effect?

Woman: People suffered when they look for it because the place becomes so far.

Woman: Also, those (young generation) who cut them ignore that the tree is blessed and needed in life

Sitraka: When you say, the place becomes so far, do you mean that the Hasina tree does not exist in the near forest or where exactly?

Woman: Yes, not in the forest but a little bit far from the forest, we cross the river

Sitraka: Any particular place for Hasina tree?

Woman: No specific place. A bit far from the forest

Man: I think that the reason why it is important is that: before, it was used to build house because of its strength. Beside Hasina is difficult to plant, it takes long time. Now it becomes few and seen so far whereas people need it for the Fisokona and Tsaborà (cultural practicing)

Ravaka: Another change is: Pangalane. The water is drying and the river line is getting narrow. How is the effect?

Man: Concerning the Pangalane river, there is no more transportation system that’s why there is no repair. Some people set sand in the river, the responsible do not repair, people can’t go along. We need to renovate it.

Sitraka: Is there any refund for the commune in case of sand collecting? Or for the transportation?

Man: Indeed, they should have it. But, in fact, all the people in Andovoranto use the Pangalana river for income sources by selling products, to do their businesses or when they wanted to transport something on boat go to Tamatave, to Manajary …

Sitraka: Now, it is not possible anymore

Man: Not possible, if you want to go to Tamatave or Antananarivo, you must pass by Brickaville

Ravaka: So how these changes affect your trade?

Audience: The income decrease

Ravaka: Well, we’re almost at the end of the discussion. Just want to know, when you are going to praise the tree or to make vow at Amborodamba, you said Nanto, Voatsilana, Votsirindrina (trees species) etc... were the tree used for it. So are they still existed or not available anymore or totally burned?

Men and women: They still existed

Ravaka: All of those trees? Still exist?

Woman: Yes

Sitraka: We can find those sacred trees in another place or in forest or just in Amborodamba?

Audience: We can find in the all the forests

Ravaka: How about the tiny Hasina tree that you used while doing circumcision, still existed or?

Woman: yes

Ravaka: Are they numerous?

Woman: Yes

Man: Sometimes we used for fencing

Ravaka: My next question regarding changes, we did not talk so much about it but I would like to know how the effect of the clean water change is? Let’s say during those 10 or 5 years, the quantity remains the same or is getting abundant or diminish?

Women: Plentiful

Ravaka: The clean water becomes abundant

Woman: yes

Ravaka: And how about the rain?

Woman: It becomes less rainy, it decreases

Ravaka: What about the air pureness? How do you feel it?

Man: Still pure and clean

Woman: Now it’s pure

Ravaka: What’s the reason of that purity?

Woman: Most of people have and use toilet here.

Woman: Besides, there are no more people who do their mess in the seashore

Ravaka: How is that change affecting you, that air pureness?

Audience: Very good!

Ravaka: And how about the rain diminution? How is that change affects you?

Man: Not enough for cultural purposes

Woman: That change has bad impacts on agriculture

Ravaka: The crops are very bad even perished when the rains diminish.

Woman: Yes yes

Ravaka: And the abundance of the clean water (eau potable), how is that change affect your life?

Woman: It makes us healthy

Woman: The diarrhea reduced

Sitraka: So, that change is a positive one

Audience: Yes

Princy: Well, I have a question about something I remarked. I observed that the seashore is getting nearer here, how is the change of the land area? How is the change, let’s say during 10 or 20 years? Does someone observe any change…?

Audience: The land is getting smaller than before, the sea came near to the village

Princy: May be in about how many meters every 5 years? As far as you know…

Women: That was long time ago

Princy: Long ago?

Woman: Long time, I don’t know exactly

Woman: Before, when they went for fishing in the sea, they couldn’t return back in a day

Man: According to a history, before the ocean was a mile away from the edge of the village

Princy: That was before?

Man: Yes before

Woman: Beside there was a stone house which served as barrier, now we don’t see that anymore. Fortunately the sea is not so rough if not the villages are already gone

Princy: My next question is related to that answer; don’t you be afraid of that situation of seashore getting nearer, so that one day will you shift to another place? For example, there will be 2 or 3 successive cyclone in two years and it will overwhelm the village, how do you think about that?

Woman: The village is slowling moving to the north Man: That north section is far from the sea and still safe

Princy: The village gets into the center

Man: Here we have just few villages but to the north we have many

Princy: Well, in general people may have different opinion of this observation as here we have young and old. Let’s consider the time you’re aware of life and let’s suppose that the natural species was 100% so my question is how many percent remains now as far as you noticed?

We may have different responses because; young and those who lived long time do not have the same view. Could you share your answer about that, before it was 100% and now how many?

Man: In my opinion, 30% left

Woman: Or 40%

Princy: What’s your response young boy/girl?

Young boy: Same as they said

Young boy: What is for sure is the natural elements here do not cover the 50% anymore, it’s below that number.

Ravaka: Let’s say comparing with the time you are aware of those natural elements, how many percent remains now then?

Young boy: Well, even when I was aware of it, it was not 50%

Ravaka: My question is, since when have you used a latrine?

Man: long time ago

Sitraka: 10 years ago, 2 years ago or?

Man: long time ago

Woman: here, we need someone to motivate people to use the latrine. The more they stimulate the more people use it. But if they don’t encourage the residents in using it, they won’t use.

Ravaka: When was the first encouragement?

Woman: I think it was 4 or 5 years ago. When there were no people who motivate us...

Ravaka: No latering?

Man: There is but…

Sitraka: Do you have it in each household or?

Man: Yes, and the more there were people who motivate, the more it becomes many.

Man: I think the time they didn’t motivate us is around 3%. They motivate us regularly.

Ravaka: Concerning the Pangalane river which is not used for merchandise transportation anymore, since when? And when was this way uncluttered?

Women: Since when there was a barrier

Ravaka: in 2001 -2002, no more transport?

Man: Yes

Ravaka: My last but not the least question is, have you some disabled people here in Andovoranto?

Man: Yes we have many

Man: Physical disabilities

Ravaka: So why they do not came at the workshop in our opinion?

Man: May be they are shy of their disabilities

Ravaka: Or maybe they were not aware of this workshop

Woman: May be they can’t go here

Ravaka: What kind of disabilities exists here? What are their forms of disabilities?

Woman: Impaired, deaf, blind, mute person…

Ravaka: From tomorrow, the three of us will start the household surveys. Do you think that it is possible for us to meet them for questionnaires or to talk with?

Women: Yes, they can answer you very well if they are not speechless

Sitraka: Just to add in what Ravaka was saying concerning that individual survey, the questions are the same as we exposed here. The reason why we’re going to do the individual survey is, we need specific point of view. As we know, here we are many and we may influence the others, but individual responses are also essential. We want to see how individual person see our demands like we did here. That is the reason of seeing people one by one especially those disabled ones. We cannot marginalize them, they are part of people here, that is the reason their opinions about the importance of natural elements count on us.

So do you think, they could help us in answering questions?

Woman: May be there are questions they cannot reply especially the mute people

Ravaka: I think we won’t ask the mute people but the impaired person may be, so…

Woman: May be they will answer may be not

Princy: I have question about the change of the environment/nature. It is different from what we have seen before about the change, because it concern the feeling of people here in Andovoranto which means do you feel sad, angry, happy or no reaction on those changes?

* Make you angry: Cyclone, it is very bad for this village. Beside the village which become smaller. The cyclones cause floods
* Make you sad: Always the cyclone: it is the source of every bad situation here (the crops are not abundant, our beasts die, and the house needs a lot of repair….
* Inevitably: Fishing
* No reaction of the change: Nothing

At last, if you have any questions for us. Feel free to ask everything you want concerning our sharing today

Ravaka: Any questions?

Sitraka: Any comments or remarks?

Man: As we’re talking about natural environment and its damages. And when you came here, you want information and ideas to get. And as we know, environment is life, so my question is, do you have any project for the restoration of all the damages here? Or something like telling people to do or not to do that or this…?

Princy: Well, first of all, the reason why we are doing this project is to seek locally the problems and injuries in a place. As you may see, each part was discussed: income, well-being, mental problem…So as long as we get the information and ideas from you, we gather them and offer to the responsible and authorities. The latter will search for procedures in order to renovate the place or to protect it. May be we will come back here to tell you about that the time it has a feedback from authorities.

Woman: My wish is that there will be a protection of this village. The seashore needs protection

Sitraka: Yes, in addition to what Princy talked before and to respond your questions, well…first if we want to do something, we need to seek ideas first (know what is going on in the place, what are the problems, what happen…? We had to get these information before presenting them to the responsible in order to give solution. Meanwhile, we do not assure that the 3 of us will give you a permanent resolution. As we are a student researcher, our duty is to seek the problems in the place and give that to the authorities. Then the latter are the one who will search for solution and take decision. But they can’t do anything without result from research like we’ve done today.

Princy: Just more precision, our duty is to search information in a native place then give it to the responsible. As we know, we have hierarchy in this nation, so we need to follow that and that’s we have done together today. The information seeking is our responsibility but the decision is up to the official authorities.

* Feel angry (03)
* Feel sad (everyone there)
* No reaction ( 0)

1. **FINAL SPEECH**

Before closing this workshop, we would like to thank the commune of Andovoranto, the Mayor. Thank you all for everything we’ve share here. Your responses are so essential for us, thanks for your participation, they are all meaningful. Thank you all!