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

**WORKSHOP TRANSCRIPT**

**Location/site:** Rural commune Ambohimalaza Miray, Fokontany Andanon’omby, Village of Ambohiboangy

**Date , time :** 28/08/2019

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

**Length of workshop :** 01h21mn

1. **FORMAL GREETINGS AND INTRODUCTION**

Princy: Hi everyone! – We are going to discuss about the ecosystem and its relationship to human well-being. I see among you there are male as well as female participants. My first question is… this is an open question and everyone is invited answer it. You can also ask for more explanation if the questions seem difficult to you. If you also have questions at the beginning of the workshop, don't hesitate to ask because we are here for that.

Woman: Some people may not understand your project so could you please explain it.

Princy: Of course, this is a research project and our goal is to identify how the local population feels about the degradation of the ecosystems and what services are important to them, and we are trying to collect this data in the different regions of Madagascar that we have previously talked to you. The information will be communicated to the competent authorities to take measures in response to the situation for example that people coming from such region suffer from such losses linked to the environment, which may concern water, forests, etc.

Ravaka: In addition to that, the people I surveyed have already asked this question. What really interest us are climate change and its consequences on the daily life of the local population. The second reason is that, here we can tell that you are not really from the main city. However, there are remote places that even the Malagasy authorities have trouble visiting. Therefore, they have no idea what's what is really happening to them. It is therefore our contribution to report what is happening there and it is also what motivated us to work on this project.

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

Princy: We invite you to share with us your points because if you don't say anything we will have nothing to report. So I'll start with the first part if there are no more questions:

First question, which elements of the ecosystem is the most important to you and in your life? Which aspect of your life is mostly affected by the environment? You can all participate and I am going to list them all here and discuss them one by one

Man: About the ecosystem, for the people like us, who are leaving in the countryside and probably for people leaving everywhere else, the rainfall is the most important element.

Princy: What about the others?

Woman: If we are talking about people, rainfall and safe water, the State should ensure safe water supply like the installation of pumps. People are struggling here. This vital to our life.

Princy: As we are talking about water, rainfall, are there other elements, in relation to the ecosystem?

Ravaka: when you leave the house and observe the surrounding nature, what is most important to you?

M: Plants

Ravaka: What types of plants?

Man: Like trees, we need them for handicrafts, for food, to make it rain and also to protect soil against erosion.

Princy: we are going to discuss those ideas point by point so we must express ourselves. Right now we have water, rainfall, plants and what else? Let's take the importance of what the ecosystem provides for each of us.

Woman: fresh air

Princy: other points? We are here a dozen participants so we should have at least ten points to discuss before proceeding to the next question.

Woman: the transportation system, is there any relationship to the topic?

Princy: Yes we can discuss about it, we’ll take it as a point to discuss next

Woman: (whispering) health

Princy: could you speak louder please?

Woman: health!!

Princy: what else?

Woman: for example the destruction of the forest?

Princy: I'm going to take this idea into account, but I'm going to repeat the question again: what does the ecosystem bring to your life? Which parts of your life are most affected?

Woman: Fifankatiavana (can be defined as the love and appreciation inside a society)

Princy: I'll take that, as I said, all the answers will be taken into account and no answer is wrong. Next?

P: society for example

Princy: let's say on the financial aspect, does the ecosystem provide anything to you?

Audience: It does! We need it!

Princy: I'm a little surprised that it wasn't mentioned earlier or that someone forgot about it. We are going to discuss the points one by one; let me count one… nine, good! There is one missing…

(Inaudible background noises)

Woman: living beings

Princy: We will now enter point by point and this point about living beings will be located at the end. In terms of the direct relationship between rainfall and the water you use. I can say everyone uses water so I would like to know how do you see the relationship between the water you are using and your environment? Your ideas?

Woman: If there is no water, the humanity cannot survive

Princy: would the reverse also be possible?

Woman: yes (laughter and inaudible noise)

Princy: Where are the main sources of water in your village?

Woman: right over there on the plains

Princy: how many are there? Are they far from here? Is there any JIRAMA installation out there? (JIRAMA is main company that provides electricity and water supply in Madagascar)? May I show you a map so that you can show me on it where they are located.

Man: In the south; for Ambohiboahangy it is located in the northern part of Amboasary, and on the other side to the east

Ravaka: We get lost in the map

Princy: we are here now (pointing at the map), what if we're starting from where the water sources are?

Man: there is a plain, there and it is located in the northern part. The safe water is there. There is also another one in the east, so there are in total three water sources for the village.

Ravaka: where is the other one in the East (asking on the map)?

Man: in Andraikiba, there is the big wall that we can observe from here but it is just located down the plain.

Princy: we're going to come back to climate change, but the gentleman spoke earlier about plants. What do plants provide you?

Man: growing vegetables provides us food, and it is our primary activity for a living

Princy: and apart from that if we look at the wild plants like trees and grasses?

Man: We use trees for firewood, the grasses for the roof; we also use the grasses for livestock, the woods as timber for construction, firewood, but we also need them because of the shade they provide, they take an important place in the rainfall cycle and during the rainy season they protect the soils from erosion.

Princy: Regarding fresh air, who spoke earlier about fresh air? Could you sir explain further?

Man: I find that the air here is very fresh and also very pleasant to live with, especially when you come back from the city. The air in the city gives me breathing problems, I just came back from town yesterday and I have a cough now.

Woman: We get headaches when we come back from the city

Woman: here we have fresher air we breathe better

Princy: Are there any other ideas regarding the air? Does everyone agree with that? Regarding transportation, could you please explain more?

Woman: there is no “taxi-brousse” (Bus); well they are very rare around here. They are not driving daily because we are located far from the city. But we do have bus stations here.

Princy: what would be the relationship with your environment?

Woman: people are tired of walking

Princy: so it is on a physical level?

Woman: Yes, especially for the elderly, and we are getting old

Princy: other ideas?

Next point concerns health, could you please share your opinion on the relationship between the ecosystem and health, is that important to you?

Woman: if the forest is not destroyed, people have good health. If the environment is intact, it is logical that people are healthy. If the environment is destroyed it is logical that health tends to become worse, was I clear or not?

Princy: when we talk about health; there are several aspects such as mental and physical health

Participant: (inaudible whispers)

Princy: who said earlier that environment brings Fifankatiavana? The idea is very good, could you explain further madam?

Woman: Fifankatiavana encompasses many things, for example, as I speak of the Bible, it is Love that is the greatest thing in this world and that everyone must fully live this Love because if we love each other we live better, the Fifankatiavana must be present in every society.

Princy: could you explain this relationship with ecosystem?

Woman: there is a relationship because we need it for the our social environment, it includes a lot of things

Princy: does anyone have any other ideas? Is there a possible link between society and climate change?

Woman: not at all, there is nothing to do with climate change but it is mainly on a human level, on everyone and society and so on, there is maybe a relationship but I don't really know how to explain it.

Woman: A society without love is it like it doesn’t exist and even the ecosystem could deteriorate.

Woman: Humans must love each other and must not enter into conflict; I think that's what she meant

Princy: So this is what can cause the destruction of the environment / Nature as Mr. Clement said? Can we say it like that? Or the opposite?

Woman: imagine that you are going out of the house and that someone is totally ignoring you, not at ease with you so it destroys the society you are living in, such as a home that often quarrels. That was just an example but not our case.

Princy: Before the last point we will discuss about nature and livestock. What could be the relationship with the ecosystem Mr. Clément?

Man: livestock help for agriculture, they help with daily activities that lead to good health, then on fertilizer, and especially with our income, it's a bonus for nature.

Princy: last shot, the financial aspect. This certainly represents a source of income. Maybe differently for each of you but also can be the same. What are these sectors that generate incomes? As far as I know most of you are farmers and carpenters. Do you understand what I mean? How do water, soil, the forest…generate income to you?

Man: we protect nature because we depend on it, our health and finance because money is the muscle of life.

Woman: If the resources are destroyed there is no more source of income, if there is no more forest there is no more source of income either

Man: it all depends on the nature, rainfall for example helps us in many activities like cultivating on terraces during the rainy season to have provision for hard time etc. sources of income like livestock and any other activity need water otherwise nothing works.

Princy: Anyone have any other ideas?

Princy: If there is no more idea, I will try to group and organize the ideas according to what you said then I will ask you to rise your hand on what is most important to you. I'm going to group the points like agriculture and livestock, and then the others, income, air, water, plants, transportation, health, love and society.

What is most valuable to you? Number 1: Agriculture and livestock (mainly on financial aspect and food)? 2: rainfall, water, plants and fresh air? 3: physical, mental health and society?

Woman: Health is the most important, if you don't have health, the rest doesn't count, even if you have a lot of money.

Princy: there is a point which was not mentioned here but which is part of the project, it is nature / biodiversity and the cultural aspect of the ecosystem. No one talked about it in the ten points mentioned above. So I am going to ask a specific question about this that I am going to do is may be try to relate it to health. Do you have any specific traditions, customs, and ancestral rites that are closely related or depending on the nature and Biodiversity? During our investigations we heard the practice of Famadihana (funerary tradition), the Raokandro (traditional Malagasy medicine practices) and the Douany (sacred place to venerate and ask blessings from the gods).

Woman: yes they still exist here, but very few and they are no longer practiced. The Douany for example, there is one here and for people who still believe in it, it works! For the Famadihana, we have never seen it here with our own eyes but we know it is still practiced in Madagascar, not here.

Woman: there is one in Ambohimalaza be (Speaking of the Douany)

Man: there are also traditional healers here

Princy: so, do you know if there is a close relationship to nature? Like for example why is it called a Douany? For whom who have already seen it.

Woman: we have never seen Douany but we know that it is for non-Christian practices.

Man: personally, it feels like we totally ignore ancestral customs and practices and thus the entire culture. There are a lot of things that are abandoned. The current generation doesn’t even know that those things used to participate into our education.

Princy: Aside from special places like the Douany, are there any recreational places you like to visit around?

Woman: Yes there are!

Princy: are there many of them?

Man: During the holidays and excursion period, the pine plantation is always crowded. It offers a nice shady spot.

Princy: And what are the purposes of this place?

Woman: well, just for picnics on public holidays, Easter and Pentecost;

Princy: is there any special spot to visit?

Woman: no, it is just a place to relax, to get some fresh air and it's also not far from the Karting station.

Princy: but for you, are there any specific places that you enjoy around?

Woman: in the fields!

Princy: in our surveys, people shared places they like Ambatobe

Man: Yes, for me it is also Ambatobe, when I need to relax

Man: I go up to Imerikasina to have a beautiful view over the whole village and the fields, a panoramic view from the summit where we can see everything,

Princy: Besides Ambatobe and Imerikasina?

Woman: at the relax garden but it is more for people from the city

Man: there is also the Rova (King and Queen’s Palace) which attracts more people for excursions. It is very famous.

Man: the Rova of Ambohimalaza be

Princy: what is so special about the Rova of Ambohimalaza be?

Woman: the place Ambohimalaza be is the place people call Douany; there is a patch of forest, big stones inside (Vatolampy) and a Fanorana (Ancient Malagasy boardgame).

Princy: How often do you go there?

Woman: We used to go there when we were young, when we flirted

Princy: Before we proceed, we would like to know about the biodiversity of this place, local plants or/and animals that you know, which are specific to Ambohimalaza.

Man: What makes Ambohimalaza famous is vegetable production.

Princy: and how the natural forest?

Man: there is none left, the only remains of natural forest is located in Asaomby

Princy: what makes this forest so special compared to other forests around or the Eucalyptus or Pine plantation?

Man: it’s a forest you don’t see anywhere else

Princy: are there any particular plants or animals living there?

Woman: yes, there is a tree that is unique to the place, which is not found anywhere else, a big tree that people do not dare to cut down.

Princy: and how about the animals?

Man: there are no more animals! People say there was Jaobady (Malagasy or Striped civet) living there but they have disappeared know.

Woman: there is also this particular greeting manner here. The Andriana (refers to noble class) who is greeted by “tsara-haba-tompoko”, it is very famous here. They greet each other like that but it has nothing to do with us. I went to work in town and my boss asked me where I came from and when I said come from Ambohimalaza he told me “you are an Andriana” and I answered no but I come from where they live . It is only in Ambohimalaza that we can see this way of greeting.

Princy: Let's get into the second part that will focus on the observed changes, the environment and biodiversity. First question, where do you notice most changes? Among you are young and oldery who have been living here for decades.

Man: we have noticed that the rainfall is decreasing and water is getting less.

Princy: when did you notice this first?

Man: each year, it seems the rainfall decreases, the rice fields dry up etc. and because of that we have delays on our production.

Princy: is it always a negative change or sometimes positive?

Woman: in general it always changes, this year is a little better than last year.

Woman: but in general it tends towards the negative, water becomes scarce

Princy: for others?

Woman: the global temperature increases

Princy: How long have you noticed this change and since when have you been living here?

Woman: I have been leaving here for 4 years now and it's not like when I moved here. It is getting hotter every year

Princy: Why?

Woman: because of slash and burn crops

Princy: Any other ideas?

Woman: the forest disappears

Princy: How long have you been noticing that?

Woman: I don't know

Princy: Let's picture that 20 years ago the total forest cover was 100%? How many are left today?

Woman: around 30%

Princy: Let's go back to the Rova, the natural forest and Imerikasina, what changes have you seen?

Man: there were natural water sources but now everything is gone. In Ambohimalaza be, there was a water source inside the forest, a very clear water, even a drinking one.

Princy: What do you think to be the causes?

Man: first there is the low precipitation and then there are people who no longer respect and break taboos.

Princy: do taboos really work here?

Woman: yes! Whenever a person is breaking a taboo, there is a strange phenomenon by which there appear many small caterpillars on the branches of trees of the remaining natural forest. If someone dares to bring goats here we can always observe wind whirlpools around which becomes a danger. Goats are strictly prohibited here.

Princy: what about Ambatobe?

Woman: there is nothing there; it's just a quiet place for outdoors activities.

Princy: have you observed any change of the landscape?

Woman: Ambatobe was a rocky place, but now there is a pine plantation and the place becomes more pleasant. This is also a place where people quiet witchcraft; the people who have changed.

Woman: there were Ficus trees growing here but now they have disappeared and the landscape is becoming more and more exposed; we can even observe a Helicopter park place.

Princy: do people use these trees?

Woman: No! They are very old and fall down easily during the rainy season.

Princy: have you noticed any changes in the natural forest around the Rova in recent years?

Woman: the area decreases, people illegally cut trees for firewood; it should be taboo in the Rova. There have been some renovations so now people know it better, there are rocks to which we throw stones into a hole and if we succeed we will also succeed in exams like CEPE.

Princy: what about the fires that destroyed some part of the Rova?

Man: in fact there were several fires but now everything is restored

Princy: we heard that there are Fosa present here

Man: yes, the fosa kills dogs overnight. They are very active during the rainy seasons. There are some in Ambatobe. We can hear them walking on top of the house at night and hunting small animals like rabbits.

Princy: is the presence of the Fosa a positive or negative point?

Man: a big negative point, it is a very bad thing because it hunts hens; they even attack humans at night.

Woman: there are also Sisals here, but many use its leaves to manufacture chewing tobacco, particularly for money and now Sisals are disappearing very quickly.

Woman: In our fields there were many but now everything has disappeared, there are only very young individuals remaining.

Man: the production of chewing tobacco from Sisal leaves is very recent here. Before, we used Sisal to mix with the soil to grow cassava in order to make it softer. You can grow Sisal but as soon as there are, people steal them for tobacco. We need it to make ropes and wires. It is also used to mark lands and also to maintain the soil. It is sad, we need sisals, for example straw roofs require sisal ropes to maintain them solid.

Woman: The Sisal leaf pickers are active early in the morning. By the time you arrive in the fields, the leaves are already spread on the ground to be dried so there is nothing we can do about that anymore.

Princy: So in general, what do you think are causing these changes?

Woman: life becomes difficult, people are hungry, we no longer think of the others but of ourselves in the first place and we do nothing to prevent it.

Princy: Do you have any questions?

Ravaka: Did someone mention earlier the use of straw roof? Is it common here?

Woman: yes, it keeps the heat at home especially during the winter and during the rainy season it offers a lot of comfort because we don't hear the rain falling even during storms. Straws use is very important for health, even for farming.

Ravaka: have you noticed any decrease in grasses?

Man: Yes, the grasses are in decreasing. People around Manjakandriana come here to collect grasses.

Ravaka: Why this decrease?

Woman: because it is used on a daily basis, such as for cattle. Also because of slash-and-burn.

Man: It is mainly because of slash-and-burn cultivation, then because people come here to harvest them and finally for daily use.

Ravaka: My last question. Regarding the Raokandro, Mr. Clément said that Raokandro is no longer part of the education and life of young people today. Why?

Man: Children played recognizing plants, which was very useful because it was part of the education to know the use of different plants in traditional Malagasy medicine. This is no longer the case; children no longer get this education and neglect traditional medicine. People are now buying expensive medications instead. The Ntaolo had a proverb saying that "a cold that could be cured with a Brède Mafane (herbaceaous plant of the Acmella species) is not worth the sacrifice of a hen".

Ravaka: do the other plants that are used in traditional medicine still present?

Man: It depends, God has already put all the things we need at our disposal but it is we as humans who do not know how to take advantage of it.

Ravaka: But are the plants still present here?

Woman: Yes, all the plants that grow here can all be used. Sometimes we don’t know how to use them

Princy: did you play leaf battle when you were kids?

Woman: Yes, it was even our favorite game. Today's children no longer play it at all. They have their own games. We live in different times. This has been neglected, we don't know why. The plants are still there but they are not interested, they are distracted by technology like watching TV.

But there are also plants that have disappeared; some plants are only visible during the rainy season while during this period, they are interested in outdoors stuffs, like Facebook.

Princy: Did playing leaves bring you something good in your life? Does it make you sad that young people no longer play it or do you get used to the idea that young people live with their time and their own hobbies?

Man: Yes it’s sad because they may not even recognize poisonous plants that can kill livestock.

Woman: It even had an effect on those who played. When I was young, I knew all the plants just by looking at the leaves. Now I sometimes don't recognize them. Those times were really different.

Princy: So which brings the question that is globalization and evolution bad or not?

Woman: On some points yes on others not obviously. For nature it is very bad for nature, manners. We need progress but it destroys the environment and we even forget what makes us Malagasy.

Princy: We would like to know your feelings about what the ecosystem brings to you?

Ravaka: on your personal life

Woman: the air here is very fresh

Princy: knowing that health can be mental and physical

Woman: polluted air causes diseases, rums, coughs and more unlike fresh air, a very active brain, and a very healthy respiratory system

Woman: there is no noise to disturb the brain. It’s very quiet even on holidays, there are no big dins.

Princy: The people here told me during the interviews that they feel more relaxed when their property is surrounded by plants. I'm asking you to talk about something like that; for example the shading provided by trees.

Woman: For agriculture, just knowing that we have water and the sources do not dry out gives a great peace of mind; that lettuces do not dry out for example.

Ravaka: How do you feel about the example just now that people are abandoning traditional medicine and that there are no longer practicing and therefore people have to go to doctor's offices or buy drugs at the pharmacy?

Man: It depends on the people, it totally depends on what he finds good for him. He makes his own choice if he wants to go to the Doctor or make a decoction of Eucalyptus. It totally depends on what or who he trusts to heal him. It’s a choice that only depends on the person himself

Ravaka: How do you see the change in your community because we can observe here a lot of people who come here to picnic during the holidays, there is a lot of open leisure space here

Man: Yes it's good because it brings a bit of evolution and modern stuff here. But you have to know that with evolution, there are always profiteers and malicious people go hand in hand

Man: I just have one question. My grandmother lives in the East of Madagascar and during her whole life she has not been vaccinated against any disease while she has lived a hundred years while I there I am still sick.

Princy: In my opinion it is not too much the question of the vaccine but it is just because of the changes, of our lifestyles like nutrition or the air we breathe or on a moral level with all the stress that we are currently experiencing.

Man: Currently people are malicious, deceitful, want to be smarter than others, no longer respect morals.

Woman: Even now we are eating more and more chemicals

Princy: To sum it up, we just want you to rise your hand about your feelings toward the situation.

Those who:

* Feel angry (2)
* Feel Sad (12)
* Feel helpless (18)
* Don’t care about what is going on (3)

1. **FINAL SPEECH**

Good! So the workshop is closed, thank you for your participation. Thank you for the exchange we had. Thanks to our host for providing us this place and many thanks to the head of the village for organizing everything for us. Thank you all!!