

Introduction for all the interviews

The purpose of this interview is to clarify some of the answers you gave on the written work I gave you earlier, which is meant to find-out your understanding about earthquakes. You can answer in your home language at any time if you want to, and you can switch between English and Sesotho at any time throughout this interview.

I stands for interviewer

S stands for student

Interview 1: Student # D41

I: Now, you mentioned that the earthquakes are caused by tectonic plates. Would you tell me a little bit how tectonic plates cause earthquakes?

S: Yes madam. Ehh...tecnotic...tecnoti...(Int interrupts)

I: Tectonic plates

S: Tectonic plates ...caused..causes earthquakes when they take

I: And you also said magma forces its way out during earthquakes. Tell me are earthquakes related to volcanoes?..Would you say they are..the two are related?

S: Yes madam.

I: And how do you think they are related? Can you just say a bit?

S:Ahh..madam question..?

I: Okay tell me, are an earthquake and a volcano the same thing? Do you think they are the same thing, volcano and earthquake?

S: ...volcanoes causes earthquakes

I: And are they the same as earthquake?

S: No they are not the same madam.

I: Okay. They are not the same but volcanoes causes earthquakes?

S: Yes madam.

I: Okay thank you. And what do you think caused the earthquake *in your area*? What do you think caused that earthquake?

S:(Silence)

I: The earthquake that took place in Mapeleng a few years ago, what do you think caused that?

S:I think is.....they are caused....they are caused by....

I: Remember there was an earthquake at Mapeleng...a few years ago?

S: ...(Silence)

I: Do you remember that?

S: Yes madam.

I: Aha..could you just say briefly maybe what do you think caused it.

S: ...(Silence)

I: Is it maybe what you have already mentioned or is it something else, and if it is what is it?

S: ...I think maybe it was the.....the displacement of...(Int interrupts)

I: Remember you can..remember you should change your language if you feel you want to.

S:..(Silence)

I: What you have said is, remember you have talked about tectonic plates and you have talked about magma, and volcanoes causing earthquakes. Isn't it?

S: Yes madam.

I: Okay, so my question is, here you are at an area where there has been an earthquake. What do you think caused that earthquake?

S:(Silence)

I: You can't think of anything? Okay tell me then..if you can't think of anything, do you think the earthquake that happened in your area, did people have anything to do with it?..Maybe did they cause it in anyway?

S: Madam?

I: Did people cause the earthquake that occurred at Mapeleng in any way?

S: People?

I: Mmhh.

S: Ah no madam.

I: You don't think its people?

S: Yes.

I: Then what do you think could have caused it?

S: ...(Silence)

I: Anything that you can think of?

S:(a cough) I think there was a high temperature..in that place.

I: Okay. Uhh..then how does an earthquake cause loss of people's lives, like you mentioned in the paper that you wrote that "earthquakes cause loss of people's lives". How does it happen?

S: ...(Silence)

I: I mean what is it that causes loss of people's lives, the loss of people's lives?

S: ..(Silence)

I: Why do people die when there is an earthquake?

S: ..(Silence)

I: Now tell me how does an earthquake cause loss of people's lives?...That is what makes people to die when there is an earthquake?

S: ...Its because of the gas that comes during volcanism.

I: Okay. And you also mentioned that during an earthquake the soil becomes fertile after the earthquake. What makes the soil to be fertile?

S:(Silence)

I: Remember you can change your language if you want to?

S: Ke hobane.....mobu...ae...*magma* ona le li gas tse ngata, 'me *sulphur* ke e ngoe ea tsona. E leng hore e ea hlokahala li...ke hore ke *nutrient* e ngoe e leng hore eka..eka etsa mobu hore o be *fertile* (*It's because the soil...magma has a lot of gases and sulphur is one of them. And it is needed...as a nutrient it can.. it can make the soil to be fertile*).

I: Oh okay. Thanks a lot, I think that's all I wanted to clarify from your..writing. Thank you.

Interview 2: Student # D42

I: Now tell me, on your answer to what causes earthquakes, you said large machines cause earthquakes. Uh..how do you think they do that? How do large machines cause earthquakes?

S:(Silence)

I: Oh let me say how do you know that large machines can cause earthquakes?

S:....(Silence)

I: Okay where did you hear that, where did you maybe get that idea from?

S: From my mind.

I: It is from your mind? Okay, and..and why, why did you tend to think large machines could do that?

S: Large machines have got the sound ..which can make.. some shaking of the ground.

I: Okay thank you. And eh.. would you tell me how animals can cause earthquakes, like in your response you had mentioned that some animals can cause earthquakes. Would you kindly tell me how?

S: They might be caused by like those ones in the river, some are not used to..to be where there is a lot of water. So sometimes they may escape from it, they are not yet..they can not be able to live outside so they try to escape.

I: Okay so tell me, when the big animals move and try to escape from the water, how do they cause the earthquakes? What happens that maybe might cause earthquakes?

S: ...As they are moving underground, the the..the.. (Int interrupts)

I: Remember to change your language if you want to.

S: Nako li tsamaeang ka tlase ka mona, ho ka fumantšahala hore ka holimo ka mona ho oa peperana ho latela hore na se li fihlile moo ho leng bonolo kapo moo ho leng thata (*When they move underground, the surface may crack depending on whether the land they are moving on is soft or hard*).

I: Okay. Is that..are you saying that when the animals are moving from where they were escaping, then they travel underground, so that might cause earthquakes?

S: Yes.

I: Okay. And tell me where..maybe who told you that, this explanation about eh..the animals and snakes moving. Where did you get that idea from?

S: Mapeleng monana ho etsahala hore ehlile e teng ke batla ke le pela teng le ha tseno tsohle li ne li etsahala ke le sieo ke fihlile kanna ka li phetloa joalo. Joale hoa hla hoa tiisoa hore eka nna eaba ke ntho tse kang bo linooa tse neng li le ka mono ka koetseng bo pele, ke tsona tse ntseng li etsa joalo (*Here at Mapeleng it is actually prevalent. I stay close to the place, and although it happened in my absence, I was told on arrival. It was emphasised that things like snakes which have always been resident in the deep waters of the lake are responsible for the incidence*).

I: Okay, so you were told by..is it you parents or who, or just the villagers, who could you say you got that information from?

S: From the villagers.

I: Okay. Now tell me, do you think people have anything to do with the earthquake eh.. that happened in your area?

S:(Silence)

I: Is there anything that maybe people have done maybe that could cause the earthquake?

S: No.

I: You don't think so?

S: Yes.

I: Okay, the next part you said property will be denatured during an earthquake. Would you kindly explain that?

S: Yes madam.

I: Mmhh. What do you mean by that, when you say property will be denatured during earthquakes?

S: Joalo ka ha ho ka etsahala hore ebe bo majoe ka nako 'ngoe, kapo bo ha ho tabooa mono, ka nako 'ngoe ho tabooa bo masimong kapo ho tabooa bo hae, so ka nako 'ngoe o fumana hore ntho tse kang bo ka tlung, nako ebang ho oa peperana, ho kanna peperana bo mona leboteng, ha ho peperana joalo o fumane hore lintho tse ka tlung tsona li ea oela ka bo tsona. Kapo e re ha ho fumanaha hore mono ka nako 'ngoe ho fihla ha bohloko bo ntlung ho latela hore na ho pela teng ha kae, joale ebe moo hobang joalo *(It may happen that sometimes things like rocks or the earth may crack. This may result in formation of cracks on fields or on walls of houses. When this happens, objects in the house fall)*.

I: Okay, thanks a lot, that's all I wanted to clarify from your writing. Thank you.

Interview 3: Student # D43

I: Now the first thing I want to clarify is that you said the earthquakes are caused by the movement of rocks underground. What do you think causes the movement of rocks?

S:...(Silence)

I: Mmhhh? What do you think causes the rocks underground to move?

S: Ke nahana hore ke ka...nkare ke kang...ha..bonakong bo metsi ana...kapo joale ha kea lokela hore nka bua ka metsi (Int interrupts) *(I think...I would say...when water ..or am I not supposed to talk about water?)*. (Int interrupts)

I: No no just go ahead its okay.

S: Ke nahana hore ha metsi ana a kene fatše mona, mongobo ona oa teng o ntso ea pelenyana, o ntso ea pele, o ntso ea pele, hobaneneng a a ba eme nqa e le 'ngoe, ke mona moo eleng hore mongobo ona ha oso le ka mobung ebe le hore mobu ona o ka hare ka mono o ba loose, bonakong boo ebang majoe anana a khona ho ea hohle moo..moo a ratang teng. Ka hona ke ka mona moo e tlare..ke hore bonakong boo eleng hore majoe ana ke bonakong boo a tsamaeang ke mona moo..mo lefatše lena le tla tsitsinyeha *(I think when water infiltrates underground, the moisture underground makes the soil to be loose, and it makes the rocks to be loose as well. This results in movement of the loose rocks..and earth will shake)*.

I: Okay. And how does temperature cause earthquakes. You also mentioned temperature, could you say something on that?

S: On temperature?

I: Mmhh.

S: E nkare le..ke hore le eng..mochesonyana ona o ka fatse, bonakong boo e tlare haeba bo ho bata joalo, ho kopana le serame sena, bonakong boo ho chesang hape-hape, majoe anana ke mona moo a tlotla a boela a tsitsinyeha hobane bonakong boo ho chesang ke mona maa *expandang*, bonakong bonana boo ho batang, a boetse a *contracta*, ha a *contracta* ke mona moo eleng hore a tlotla a siea sebakanyana seo eleng hore ke sane seo eleng hore ane a se entse bonakong ba a *expandang* joale ke nahana hore le hona ho tla *causer movemente* nyana ono (*I can say it's because of changes in underground temperatures, sometimes it gets cold and other times it's hot. The increase in underground temperature results in expansion of rocks, while low temperatures cause the rocks to contract. The contraction and expansion of rocks may cause some little movement of rocks*).

I: Okay. And you also mentioned that eh sometimes earthquakes happen when eh..there was a snake or something. Could you just tell me about that idea.

S: Ka bonako bo bong, I can say ka li kutloisiso tseo ke eng ke 'ne ke li utloe bo ha ho ntso ho buuoa, bo hona bo ha batho ba ntse ba bua, nkare hona le nooanyana mono, hona le koetsa, ene ba be ba o hlalotse hore nooa enana ha e felle mono feela, hona le bopelenyana moo eleng hore e hona teng. Nka 'na ka re hona le mokotinyana ka fatse ka mono eleng hore e kene tlasa ona. Bonakong boo eleng hore e ea tsitsinyeha, bonakong bo bong ke nooa e kholo, bonakong boo e tsitsinyehang ke moo rona monanang ka holima lefatse ke mona moo re tlo tla re tsitsinyeha, re ipotse hore na hana ho etsahalang, re sa tsebe hore na ho nkang sebaka keng (*From what I'm told sometimes, I can say there is a big water-snake in a hole underground in deep waters. At times when the snake moves, particularly if it's a big snake, it causes the surface of earth to shake, and we wonder as to what is going on*).

I: Okay, and you also said during an earthquake there's a deep sound. How do you know that, how do you know there is a deep sound during an earthquake?

S: Ha eba ke lutse ka tlung ka mona, bonakong boo..bo..ke hore earthquake e etsahalang, ke mona moo ke tla..nqe 'ngoe ke lutse ntse ke ituletse ka hara ntlo kapa ke kantle, ke tla utloa lefatše lena le tsitsinyeha le re (*illustrating by body shaking*). Bonakong boo le tsitsinyehang, ke tla utloela fatše hona le molumonyana, o mong o kang ekare hona le majoenyana a thetchang kapo..hona le nthoe 'ngoenyana e oelang ka fatse ka mona (*If I'm in the house or outside at a time when an earthquake occurs, I'll feel the earth moving like (illustrating by body shaking). As it shakes I would hear some sound as if rocks are rolling or something is falling*).

I: Okay. Tell me, have you heard that deep sound before or maybe its just what you think would happen?

S: Enana ke se ile ka e utloa hobane bonakong boo e etsahalang ka mona ka Mapeleng, ke ne ke lula monanang Ha Theko. Bonakong bona boo e neng e etsahala, ha ne eba ke ka tlung, ke tla utloa ka tlung ka mona ho sisinyeha, le 'na mona moo ke lutseng ke sisinyeha kere (*illustrating by body shaking*). E reng bonakong bono nqe 'ngoe ke hleki-hlekile linthonyana mohlomong ke li entse mokolokotoane-nyana mono, ke mona moo li tlo tla li oela fatse. Ka moraonyana, bonakong boo ekang e ea thola ere..ho tla bo re kiti!kiti!kiti! Ke be ke utloe hore eka 'na eaba hona le nthoe oelang feela ke sa e bone hohang. Ke be se ke nahana feela hore ache e ka 'na eaba ke ka fatše ka mona hobane ha hona nthoe ke e bonang e oela (*I heard this one because when it happened at Mapeleng I was staying at Ha Theko. At the time it happened, I would feel some movement in the house and I would shake. Things that were orderly arranged in the house started falling. After sometime there would be sound..kiti! kiti! kiti! As if something is falling, though I could not see what was falling*).

I: Okay, and you said everything in the house will fall. Eh..the sound and the falling of things in the house, is it something you have observed, something that happened and you saw it happening, or maybe its just what you think could happen?

S: Enanang ene etsahala hobaneneng le bo-matlo bonakong bono a na peperane, o bona hore joale ntlo enanang bonakong boo ho etsahalang hore e hlokohlehe, o bone hore e tla re o bo menne liphate ha kere re ee li mene tjena feela, e be ele hore li ea ikoella fatše mono. Lijana tsane le tsona ha li qala li tsitsinyeha li re, li *plate*-nyana tsena li potela ka mora tse ling li re (*illustrating by hands how things shifted*), ebe li ea oela (*This one really happened because even houses were cracked. Things that were orderly arranged such as bedding fell to the floor. Dishes were shaking, and plates shifting behind others (illustrating by hands how things shifted), and then they fell*).

I: So you actually saw that happening?

S: Ee (Yes).

I: Was it happening in..were you at home then when it happened?

S: Ee (Yes).

I: Okay. Thanks a lot.

Interview 4: Student # C44

I: Now, the first question I would like to clarify is that you said eh..earthquake is the coming out of magma. Would you tell me more about that, how the coming out of magma eh..and earthquakes, how they are related?

S: Ke nahana hore *magma* le earthquake li *relater* ka hore earthquake e tla be le manene moo lefatše moo le tsitsinyehang, 'me ha le tsitsinyeha, *magma* ho ka 'na etsahala hore sometimes ebe o oa tsoa (*I think magma and earthquake relate in that when the earth shakes, sometimes magma may come out*).

I: Eh are you saying that the..the..when the earth shakes the magma may come out then?

S: Yes.

I: Okay. And are earthquakes related to volcanoes?

S: Ke nahana hore li ea tsoana hobane e tla re moo ho etsahetseng earthquake ebe ele hore *magma* o ka..o ka tsoa (*I think they are the same because where an earthquake occurred magma may..may come out*).

I: Mmhh. So you think..do you think an earthquake and a volcano are the same thing?

S: Yes.

I: Okay. Now during an earthquake do you think the ground change or does it stay the same when an earthquake is happening?

S: E ea chenchela (*It changes*).

I: And how, maybe how does it change?

S: Ka hore ho etsahala hore hoba le..le li crack (*When it happens cracks are formed*).

I: Okay. Anything else besides the cracks, any other way in which it changes?

S: Ache ha ke nahane joalo (*Well I don't think so*).

I: Okay, you said the upper part of the earth is scattered away during an earthquake. Would you just tell me more on that?

S: Ke bolela hore ke mona moo ho tlabe ho petsooa, 'me ha ho petsooa ntho tse kang bo-majoe li ka tloha tsa etsa sisinyeho ea lefatse (*I mean that when cracks are formed, things such as rocks may cause the earth to shake*).

I: Okay, and what do you think caused the earthquake in your area?

S: Ke nahana ke taba ea metsi a mangata ka fatše, moo ho leng bonolo a ka khona hore a ka ipatlela ho fihlela moo a lo fihla ka holimo-limo, joale ke ka hona ho tla etsahala molumo ono o joalo (*I think it is because of a lot of water, where the land is soft water can find its way through until it reaches the surface, then there will be that sound*).

I: Okay, and the water you are referring to..where is the water in your case, in this area. Which water are you referring to that caused the earthquake?

S: Katse dam.

I: Okay. And do you think people might have caused the earthquake in any way?

S: No.

I: You don't think so?

S: Yes.

I: Alright thanks a lot that's all I needed to clarify, thank you.

Interview 5: Student # C43

I: Okay, you said during an earthquake magma comes out through a crack. What..what causes the magma to come out during an earthquake?

S: The movement of the earth which is (uttered something not heard by Interviewer)

I: Sorry the movement of the earth which is what? Sorry I missed that.

S: Causing faulting.

I: The movement of the earth causing faulting?

S: Yes.

I: And how does..could you just say a bit more on that?

S: And the layers will go down.

I: What layers are you talking about?

S: The layers of the earth goes down..downwards.

I: Mmhh.

S: And magma will come out...the crack.

I: Okay. Are earthquakes related to volcanoes?

S: Yes they are somewhere connected.

I: And how are they connected?

S: They are both destroying people.

I: Mmhh.

S: And their properties.

I: Are an earthquake and a volcano the same thing?

S: ..Sometimes they are the same.

I: Mmhhh. Okay do you think they are the same or do you think they are different?

S: I think they are the same.

I: You think they are the same?

S: Yes.

I: Okay. Eh during an earthquake does the ground change or does it stay the same?

S: It change.

I: How does it change?

S: It makes the cracks on the ground.

I: Okay. Now on your answer..earlier you said that eh.. what happens on the ground is that it burns plants and it kills people. What is it you are referring to, the *it*, what is that burns plants?

S: This one was just eh..advantage.

I: Mmhh. An advantage of what?

S: Disadvantage.

I: Disadvantage? Okay of what?

S: Of earthquakes.

I: Okay. What is *it* that burns plants and what is *it* that kills people?

S: Earthquakes.

I: Earthquakes kill people?

S: Yes.

I: And..and what is it that burns plants?

S: Is that earthquakes.

I: Oh its still earthquake?

S: Yes madam.

I: Alright. And how does it kill people, how does an earthquake kill people?

S: Ooch...

I: Just remember that you can switch your language if you want to. That is during an earthquake what is it that happens that..that can kill people?

S: Ke nahana hore mohla..ha etsoa..ha etsoa mobung (Int interrupts) (*I think when..when it comes out of the ground (Int interrupts)*)

I: "Ha etsoa" what? What is it the "ha etsoa"? (*What is it that comes out? What does it refer to?*)

S: Earthquakes ha etsoa mobung ebe ele hore e phara motho ebe o oa cha (*When earthquake erupts it burns people*).

I: Okay, that is an earthquake?

S: Yes.

I: Okay And uhm..you talked about the liquids underground. That the liquids underground which are hot maybe forced to go out. What are those liquids you're talking about?

S: Earthquakes.

I: Okay. And what causes the liquids to come out?

S: ...Ke hore *pressure* ena eleng ka ho eona ka mono e *forcer* hore etsoe (*The pressure inside it forces it to come out*).

I: Okay. What do you think caused the earthquake *in your area*?

S: ...(Silence)

I: Remember there was an earthquake a few years ago..at Mapeleng? Do you..are you aware of that?

S: Yes.

I: Okay. And what do you think caused that earthquake?

S: Ke tšitšinyeho ea sebaka (*It's the shaking of a place*).

I: And what caused that?..What..what made it shake?

S: Ke metsi...metsi ana ha ntsa monyela (*It is water..when water infiltrates*)

I: And how did the water do that?

S: Aa monyela....ebe hoba le tšitšinyeho ea sebaka (*It infiltrates..then the earth shakes*)

I: And which water are you talking about?..You are saying the water sinks into the ground, isn't it?

S: Yes.

I: And then which water are we talking about?

S: Ana e re a noang ana (*The one we drink*).

I: For the earthquake that happened at Mapeleng, which water caused the earthquake there?

S: Which water?

I: Mmhh. Like you said it's caused by the water when it sinks underground?

S: (Heaves a sigh)

I: You know we can have water when it's raining, or we can have water from the wells, or we can have water from the lake or from the dam. We can have water in different forms even in a river. So which water are you referring to?

S: Water of the dams.

I: And is there a specific dam that..that you..that the water could have caused that?..Maybe any specific dam?

S: Yes.

I: Which dam could that be?

S: Katse.

I: Okay. And do you think people might have caused the earthquake in any way?

S: No.

I: You don't think so?

S: Yes.

I: Okay, thanks a lot that's all I needed to clarify. Thank you.

Interview 6: Student # C42

I: You said you think earthquakes are caused by the dam. Would you tell me how?

S: Yes. The ..when people build a dam, there will be too much water there in the dam, and this water can cause earth to shake.

I: Alright. How does the water in the dam cause the shaking?

S: You see some of the water will go in the ground, and will make the rocks there loose. Then the shaking start.

I: Okay. Besides making the rocks loose, is there any other way in which the water can cause an earthquake?

S: I don't think so.

I: Okay. Will you tell me more on how snakes and crocodiles cause earthquakes?

S: Mmh..uh..when the snakes that live in the dam are fighting the other one has to go away..and ..and maybe find another place to stay. And....(silence)

I: And uh, when the other snake goes away, then how does that cause an earthquake?

S: Because the snake is too big, when it moves it makes the shaking, and we hear our houses shaking.

I: Tell me, where did you learn that snakes can cause earthquakes?

S: You see... uh our parents..uh and other people know it.

I: Now tell me, what do you think caused the earthquake *in your area*?

S: Uh the earthquake caused in my area because the LHDA people made the big dam, Katse...and so that caused it.

I: So you think that the earthquake in your area happened because of the Katse dam?

S: Yes.

I: And how did Katse dam cause it?

S: Uh...uh..there was too much water there. So the rocks there were loose because of the water.

I: Okay. Do you think people might have caused the earthquake in your area in any way?

S: Mmhh?...sorry will you...what did you say?

I: Can you say people caused the earthquake in your area?

S: Yes, because when the dam was not there, there was no earthquake.

I: Okay so what did people do to cause this earthquake?

S: I..I think because they build Katse dam.

I: Okay. Now, you said the ground will be hot during an earthquake. What makes it hot?

S: Uh the ground?

I: Yes.

S: I think it is the magma.

I: Could you tell me more about how magma makes ground hot?

S: Uh..when it is coming out to the ground. You see magma is hot, so it makes ground hot when it pours on it.

I: Alright. What makes the magma to come out?

S: Because of earthquake happening, so it goes out.

I: Does magma always come out during an earthquake?

S: I think so.

I: Okay. Tell me are an earthquake and a volcano the same thing?

S: Uh...I think they are not the same.

I: So you think they are different?

S: Yes.

I: And how do they differ?

S: ...(silence)

I: I mean how is an earthquake different from a volcano, if you think they are different?

S: I think a volcano uh.. uh.. has magma. An earthquake causes shaking.

I: Okay. Does a volcano occur every time during an earthquake?

S: ...(silence)

I: Do you think magma always erupt during an earthquake

S: Yes I think so.

I: Thank you, that's all I needed to clarify.