



## **Towards COP21: Broadcasting the voices of the communities**

### **The Importance of Farmers Adaptation for Facing Climate Change**

This program is the result of our interview with Mr. Leonardo Ratuwalangon, a farmer who lives in the Molompar village, southeast Minahasa district, North Sulawesi. He is also a former activist who had worked at the Diakonie Katastrophenhilfe (humanitarian aid agencies in German) that concern on environmental issues and disaster, including global warming and climate change that has occurred in Indonesia.

Global warming, or climate change, is the result of a shift in weather patterns, or erratic weather. These conditions cause difficulties to most of the farmers in determining the cropping calendar and varieties that they planted. Farmers are one of the most vulnerable groups who get the impacts of climate change. Drought, floods, and sea water intrusion is one example of the threats that are increasingly being faced by farmers in Indonesia.

#### **Mr. Leo, could you share about how the impacts of climate change are felt by farmers?**

"Before, farmers could determine the cropping calendar (planting patterns during the year) based on climate forecasts but now it has shifted and become unpredictable due to climate change. So farmers have difficulty to make planting calendar and determine the commodity to be planted. The shift in climate should be anticipated by the farmers so that they can adapt, but in fact the information about forecasts of climate change offered by BMKG (organisation of meteorology climatology and geophysics) has not been evenly distributed to farmers so it becomes one of the obstacles that must be resolved by the government".

#### **What happened with farmers in your village?**

"At our place, we experienced just know that the information about weather forecasts on television instead of climate change forecasts and the required farmer's is not the weather tomorrow or the next day or 1 week, 1 month, but the future climate when he faces growing season. These data are never reaching farmers directly, (they are distributed) only up in certain institution. We can see a shift in the season, the cropping season can be brought forward or pushed back because climate change does not only affect water, it also affects the pests".

#### **It means, actually, that all this time, the information from the Ministry of Agriculture exists but the farmers themselves have not had access to it?**

"Yes, as I know it had never been communicated to the farmers, perhaps the information up to the groups which are already close to the agriculture person, how about farmer who can't get access of information, so that in this situation I think the importance of the community radio functionality because I saw in Java there the pedicab driver still hear their radio by hanging the radio on a rickshaw or they hear in the neighborhood".

#### **How about the farmers who live in your village, are they also affected by climate change?**

"Yes for myself, I am the culprit when I planted chilli expected in right now has begun to harvest but because the heat continues, finally now going to wither. In my place, there are some places which it is rather difficult to do irrigation. Usually, we rely on the rain but it turns that now, from the month of May until October, we have extreme period without rain while previously

we had entered into the rainy season. Here now, shifts are already going 3 weeks so this is already too hot".

**So, in order to overcome that condition, what efforts have you and other farmers in your area done?**

"For a while, we just saw and left it like that. For example, there are many corns that had dry so extensively that they could not bear fruit. In the area around us, it was already too dry to produce and no efforts have been added as well due to climate change. We should have adaptation from the beginning not when it's already happening. So, two things to address climate change: mitigation and adaptation, something that can be done by the community to adapt. In the sense of the word we know, let us adapt to the changes that will occur."

**In your village, how many farmers already use organic farming system? Is it also influential to mitigate climate changes?**

"Well it's true... if we use a lot of chemical substances, it will affect (the air because of) the gas that is produced and will it will cause global warming. Organic farming is one part of the adaptation. I use plants, cow dung and other materials to make fertilizer by myself. Here, there are some people who begin to make organic fertilizer but they are requiring a long time because the process of changing the mindset (takes time). Already ingrained fertilizer that only need be scattered and is easy to buy at the store (is easier) whereas now he must do it by himself".

**How about the government's role? For example, the role of agricultural department and organisations which are concerned by environmental issues and agriculture, (are they doing something) to tackle the climate change?**

"Still as usual, here only in theory. Only by doing appeals and making meetings. So now, the farmers' group was formed only to get aid. For example, they got a tractor after that they disappear again."

**In the future, what Mr.Leo expects from the role of government and other stakeholders in order to support the farmers to adapt to climate change?**

"What is expected is that they come to meet them. Then, together, they identify the problems there, together with the communities; they identify what can be done so that they become part of solution. They are not asked to work but they found the solutions by themselves through a facilitation process of the people who are concerned. They will be motivated to think and finally they will find the answer".

**In general, based on your experience in several regions in Indonesia, how are the conditions of climate change in some areas and what is causing climate change?**

"If it traced the cause of climate change is so technical, we have to talk about the emissions that come out of a variety of things including one of them is agriculture. Beside it, the main is (pollution) from the factories and now the burning of peat also causes emissions big enough that will affect the ozone layer. Also contributing to climate change are methane gas from agriculture and even in Europe there is mention about the livestock. The impact in every region is difference suitable with the conditions there".

**Besides the farmers who feel the direct impact of climate change, who are also feeling the impact?**

"Fisherman... In the West Java, we saw that fishermen have to go farther to catch the fish but because of their equipment, especially the fishermen who do not have a machine, ship or boat which engine (they can't). We often see on television (stories) related to them, they cannot go to sea because its part of the weather changes, high waves... For a long time they could not go to sea. Those who are very affected of climate change are farmers and fishermen".

**And finally, it has affected their economic conditions, right?**

"It's true, their income has decreased. Their children already cannot go to school or their health was impacted because when income is less, they only buy fuel to go to sea again. Also, (they don't have enough income to provide) food to eat... it is not enough so that will effect on health, influence in education".

**As long as you have activity in Diakonie, certainly you meet with partners in the regions who are affected by climate change? What are the barriers that are most often experienced to be able to adapt to climate change?**

"Yes, sometimes it comes from the community that has long been resigned, the obstacles that traditionally have developed for a long time. It takes more people who have a passion and commitment to invite and eventually they can be (overcome). So it is very complex in the sense (that it) requires a high commitment of the government to it and it cannot be handled only by one party, it cannot be submitted to agriculture party. (it is) not as business is usual, on the first business counseling. And we experienced (this) in West Java is the PPL (agricultural extension of field) with, usually, an agent of plant fertilizer factory or trader. This is also one of the constraints because they do not promote organic fertilizers but they promote certain brands".

**Listeners, thank you very much for your attention. We see you again in our next interview talking about other environmental issues with me Noor Chasanah who guides this interview, greetings democracy.**

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