

Back in Tembak, March 22nd, 2014

The water still flows behind Nayau's house, albeit not as noisy as usually. The Philips LED lights still manage to shine but with a listless low glow only. The Dayaks here have learned that these bulbs are the only ones that seem to survive all the spikes and lows in voltage. The capacity of the hydro powered electricity supply is lower than I ever saw it before during the many previous visits and I notice, here at 4 am on terrace of Nayau, that only a few lights are actually kept on in the village. There has been no rain for a very long period. Many places that have no road access cannot be reached by boat anymore due to the low levels of the rivers. Already the rivers were much harder to pass because of the constantly shifting sand and mud banks that appeared everywhere in the rivers because of the erosion of the palm oil plantations and the destroyed river banks that illegal gold seekers with their big equipment flushed into the once crystal clean rivers teeming with fish. Now the Kapuas river looks more like a sewage channel devoid of fish! And because of the drought everywhere dead wood trunks and branches stick up from the muddy bottom making the attempts to pass with feeble canoes and glass fiber hulled speed boats even more hazardous for the desperate few that have to bring loved ones to hospital from areas where there still are nor roads nor health care facilities.



Hydro power plant Tembak

Last night with tears in his eyes my friend Apui, the keeper of traditions in Tembak, told me there would not be a harvest feast this time. For the first time in 65 years his complete harvest failed! No rice at all! And the spout that let through the abundant water to push the blades of the water wheel driving the dynamo that provides electricity to so many families here in Tembak, has now been replaced by the end of a beer bottle to at least still make the wheel move. Although the speed of the water wheel can then be maintained to keep the voltage up it results in a very small power output, which explains the darkness I now witness in the village. Apui and others

last night also reminisced about what their fathers and grandfathers had told them and got to the conclusion that this failing of the harvest had never happened in at least 140 years!

The roosters are crowing, soon the sun will rise and the village will come to live with the voices of children and the first motorbikes taking the rubber tappers to their fields. And then my guests from The Netherlands will wake up and we shall go see the waterpower installation that Apui initiated and that the villagers themselves designed, built and adapted of an old dynamo and simple local materials. We wrote a proposal for some hydropower expert to see if we can improve on the output of the power from the existing water supply. It seems we will need it more than ever before now climate change is even reaching the heart of Borneo...

At night the flow of water gets bigger, during the day it is less, especially on sunny days. Lovely to actually measure the evapotranspiration of the forest that releases this water slowly and protects the village from floods! And all with just an ampere and voltmeter!

But the drought is serious and thinking in my scientific thoughts and little "eureka" moments I soon revert to the enormous impact of the drought that will need much bigger solutions for the local people and nature here. I think about how Apui continued to tell us all last night that in his 64 years here he has never experienced a drought in this season. And never have his father and grandfather! It becomes completely clear to me that this drought is unprecedented here in the interior of Borneo. The lush rainfall, as I saw from the data carefully collected by Brother Joep, a recently deceased missionary from Sintang over a period of 40 years, is now coming down in more irregular and intense showers.

Father Jacques, who is continuing the measurements, told me that after a long drought just the day before yesterday during the night they had the first real rain and right away it was 100 mm rainfall in a matter of a few hours! That explains why we saw, while flying above the equator and Indonesia's longest river, the Kapuas river below us flowing as a muddy yellow snake crawling between the huge open sand pits where thousands of gold seekers, like the old fashioned gold rush of the American west, are going deeper into the surrounding forest with their noisy pumps to look for the precious yellow material. And the mercury... A recent article in Science put the Kapuas River in the top five of most polluted places in the world! Add to that the fungicides, pesticides, herbicides, rodenticides and fossil fuel based fertilizer of the run off and seepage of the oil palm plantations and you can understand the anger of the Dayaks at the loss of fish. Only a few of them have already made the connection between the river water and the deteriorating health of the people along these polluted rivers. Already a few years ago I got a copy of a report that was never published and I was told to keep confidential...



Now it is getting clearer by the day. I sincerely believe that climate change has reached the interior of Borneo, even here putting an end to the seasons that the local people used to base their traditional swidden-agriculture upon. And now those without money, and whose lives have depended upon the forest for thousands of years, are now faced with the risk of starvation. Not yet, but Apui's eyes look far and are glazy. He can see far ahead for he knows the past. I know this is serious...

And the Illipe nut trees are flowering. All of them! Everywhere! But never before in the known history of the Dayaks here have they flowered in March! Never before has there been a fruiting in August/September! And the durian trees are flowering as well. When they both flower it is not good many Dayaks told me. Both harvests are at risk of failing when this happens. Another case of allelopathy I did not know about yet? Allelopathy is the negative impact two organisms can have upon each other such as the fact that every farmer will tell you not to plant an avocado tree next to your lemon tree if you ever want good lemons. Will these trees carry the fruit and bring the reserves of valuable and healthy fat for the people and their animals? Clearly Apui is right, we should be worried...

Actually we are here for the Illipe nut trees, as well as the sugar palms. We means Father Jacques and myself together with a group of people that are supporting our work here with the Dayaks

and for the rain forest and the orangutans. After the long depressing ride through the ever-expanding oil palm plantations from Balikpapan to the Tembak village, we made it in time to visit the nearby mini Illipe nut factory under construction and to discuss its progress last evening. And with all that I saw and heard I feel that there cannot be time for a long sleep despite the long day we head. So I sneaked out from underneath the mosquito net I share with Father Jacques in Nayau's house after a few hours of restless dreams so I can process yesterdays information and to write this blog for you.



Ever expanding oil palm plantations

I have written elsewhere much more about the Illipe nut trees, but I provide a quick summary about these special trees here. They are giant jungle trees found in many places close to rivers in Borneo. Once every four to five years, normally during an El Nino year, they provide a massive harvest of fat containing fruits. From it the Dayaks have made the formerly famous Borneo tallow. They cook with it, eat it in times of starvation, use it for candles and as medicine, and sold it during the mass flowering seasons to the factories in far away Pontianak through a range of middlemen. The fat is healthy, has a high melting point and can be used in cosmetics or as a replacement for cocoa butter. Very valuable... but its real value has never reached the Dayaks who own the trees and collect the fruits. And that is what we want to change! So we are building here in Tembak what is probably the first mini factory for Illipe nuts in a village around which these jungle trees are still growing abundantly.

Later, if the factory is successful in improving the income of the local people, we will also bring special Illipe nut seedlings that result in trees that can produce the valuable nuts already 7 years after planting and after that produce nuts every year. This stable production will make the regular income from the nuts even more valuable and that in turn will make the Illipe nut forest more important to preserve and more expensive for the oil palm companies to try to buy. And that in

turn can hopefully lead to a safer environment for the orangutans that we are releasing in the traditional Dayak forests.



Illipe nuts

Yesterday we had a muddy but still good ride to Tembak, thanks to the donation of my friend Willy from The Netherlands, who enabled the Dayaks to buy rocks to themselves fill up the deep holes in the last few kilometers of road from the oil palm plantation to the village. Willy is a road construction expert and according to him there should be no need for that road to be that bad. But the only good roads are the ones in the oil palm plantations and that is basically the only promise the oil palm companies give that they will make a road to the remote villages. It is of course also promised by all the political candidates, that only show up in the Dayak villages before elections to buy votes. And the Dayaks like to ride motorbikes now, and have hand phones and go to the towns. So roads are important and become the main tool for companies to persuade the local people to part with their land and future.

My good friend Father Jacques, the formerly Dutch missionary in Sintang, who has spent almost half a century amongst the Dayaks of the interior of West Kalimantan, has seen first hand the changes the so-called modern development has brought. And he is quite down to earth about it all. "Of course the Dayaks want the modern things! In the villages there is no work, in school they learn that they are primitive and the modern life with instant rewards is simply too attractive!". And he tells me the grim statistics that 90% of the young Dayaks that come to study in the city of Sintang already quit studying after the first year! That drugs and alcohol have made inroads amongst the young generation. And he sadly states that the young Dayaks force their parents to sell their land so they can buy (on credit!) motorbikes and enjoy the modern life...

So we cannot completely put the blame for the forest loss to these enormous oil palm companies on the greedy outsiders only. For sure times are changing and so are the people. But the costs are

so horrendously high! For an environmentalist like me, having worked here for some 35 years and having witnessed many of the changes that Father Jacques noticed, the price everyone in the world is paying for these transformations is simply too high. World's most polluted rivers, the conflicts amongst the Dayaks themselves, the climate change and failing harvests, and these things are merely the beginning!



Father Jacques

Less than 20 years ago the Dayaks of Borneo's interior came together to discuss their situation and decided that they felt cheated by the intruders, especially the people from Madura, who became a lightning rod for their years of frustrations. The blood beaker went around and a few months later all Madurese people had left Dayak country and some 3.000 Madurese heads were cut off. Now the same feel of despair is filling the air. In 1998 the huge income inequality and the corruption in the political system enabling that situation came to a collision with the less well off too and there and then the more wealthy Chinese community became the target of the masses to vent their anger and despair leading again to atrocities.

Spending so much time with the Dayaks here, Father Jacques and myself see dangerous signs in the interior again. These three statues that Father Jacques was asked to put on his altar in his open air mass amongst the trees can probably say it better than any words I can put to this digital paper. To me they say: *We Dayaks can no longer speak and our voices are not heard, all that is left is our hope that our children may survive through our support but they are angry...*

And the local people everywhere are already facing off with the oil palm companies. Thousands of conflicts are already happening almost everywhere like in Papua, Sumatra and Kalimantan. People getting shot in their backs, burned camps of companies, so many Dayaks put in jail, barricades, etc. But the companies are strong, for they can bribe the officials who support them by betraying their own people. The remaining Dayak communities that still want to live the traditional way seem to have nowhere to turn for help. And that makes me feel as angry as they

are. If they cannot beat the companies, what might happen then? Perhaps the more industrious transmigrants that build nice houses, are making rice fields, and are legally buying and taking over the Dayak lands piece by piece might be an easier target? I don't know, but what I do know is that this situation is not good and the traditional Dayaks need help. And I would like to help.

So what help can we give? We need to provide truly sustainable alternatives that can bring infrastructure and modern facilities to the villages themselves while maintaining the cultural and social fabric of the tribes. And that is what we as Masarang are trying to do here in cooperation with the local organizations such as Father Jacques Kobus foundation and the Catholic Church. We do this through the sugar palms, the Illipe nut trees, through biochar to replace fertilizer, through putting value to other non timber products like resins and medicinal plants, through bringing integrated solutions for infrastructure, health, education and food security by means of technologies like the Village Hub.

In the mean time it is a day later that I resume this journal/blog. We are back in Sintang after a day in Tembak and surroundings, especially the Spauk village, that will leave scars on my soul for years to come... Let me pick up on today's events.

After starting my blog early in the morning, gradually other people started waking up. Father Jacques, with whom I shared the room and mosquito net, joined me for the all important morning coffee, that we normally share at 6 in the morning as well at the Kobus Foundation. The guests from The Netherlands also join us again at breakfast, after yesterdays discussions on the projects on the Illipe nuts and the sugar palms as alternatives to help the local Dayaks preserve income from their natural forests.

We go to see the new longhouse, then a walk past the medicinal plant garden of Apui, then up to the mini hydro the people from Tembak built themselves. We noted the limited water flow and we found lots of fantastic mushrooms! This is a real treat for someone like me who worked so much with fungi in the past. Clearly their presence is related to the flowering of the abundant Illipe nut trees. The flowering seems to set of a flush of carbohydrates in the system of the trees that also benefits the symbiotic ectomycorrhizae (fungi that help the roots with water and nutrients in return for those sugars).

Then we walk past the orangutan clinic that is now almost finished for the upcoming release in April and then we head back to the house of Nayau from where the cars will take us to the second big tribal meeting in the village of Spauk, towards the west of the Saran forest that we want to protect together with the Seberuang Dayak tribe. Luckily no rain otherwise it would not have been possible to get very far. After passing the Sungai Bulu village we then suddenly enter the disaster area! The DNS oil palm company! What a ravage, what desolation! Giant dead trees everywhere, huge amounts of wood laying around and the topsoil scarified by bulldozers building terraces on often much to steep slopes where they are not even allowed to plant oil palms! And we take lots of powerful pictures showing that they are cutting down virgin forests! This is simply a crime! I have no other words for this. Just let the following pictures speak for themselves...

Then we got to a very steep and muddy slope where at the bottom the connection to the uphill continuation of the road has been lost. When we stop almost magically a large horde of motorbikes appears as out of nothing and we all take place on the back of the area's most skilled bikers! Truly impressive performances we witness how these bikes climb up the steepest hills, master the smallest paths, until finally we enter the village of Spauk and get to the church where next of it an improvised longhouse has been erected. There are lectures going on inside by people from the church, lecturers and local leaders. We get to eat something first then join the meeting.



Before it is my turn to speak (I got formally invited so no one can later blame us for showing up at the meeting, since somehow the police already knows about our presence here and a police car was driving through the oil palm plantation following our car) I listen to the sad reality that these people tell each other. Everyone knows how serious it is, but no one seems to know how to get the politicians to keep their promises or how to get their rights acknowledged. The lawyers explain that the laws are there but in order to follow up you need steps and at every step the Dayaks are told that the bureaucrats are still “busy”. Busy selling out...

Then one traditional leader stands up and speaks: “I hear what you all are saying. And I see it every day. But what can we do? What can I do? The only thing I can think of is cry. All I can do is cry!” And most of us have to wipe some tears from our faces... Then it is my turn to speak. And I speak about the forest values, but they already know those. And how our Illipe nut factory can empower the Dayaks in this time of failed harvests and encroachment by outside parties. And I promise to visit the Blimbing district to pak Tomo, the young village head of Lawang village there where they have thousands of big sugar palms and I promise to send our Masarang master tapper to teach them tapping and other useful techniques. Then I ask Father Jacques to speak to the assembly and he manages to bring some laughs to them. After that I ask our guests that are enabling us to help these Dayaks with the various projects they are sponsoring and they truly manage to bring hope to their hearts. Friendship, unhindered by language barriers, flows! Florine, David, Piero, Hans, Dirk-Jan, Alexandra they all speak and everyone of them lifts the spirits of the Dayaks.

The assembly comes up with a closing agenda and agrees on the mapping of the Saran forest and the boundaries between all the villages surrounding the Saran forest. That should prevent oil palm companies from instigating conflicts amongst the members of the tribe. Agung, the son of

Apui, looks hopeful! He was trained to do the mapping and will now be able to move much faster!

Then we drive back, again on the armada of motorbikes and through the horrible devastated oil palm landscape with muddy rivers where no obligatory buffer zones have been left as is required. And back to Tembak village where we eat something and then head back for another three hours of travel over bad roads until we finally reach Sintang and the Kobus Foundation. There we have more discussions amongst all of us how we can help these Dayaks and the orangutans and basically our world. When I finally go to bed the image of the crying Dayak leader still haunts me...

Willie Smits,
March 23rd, 2014
Sintang