

## I. First impressions in Cotonou

As I get off the Air France plane in Cotonou, a flush of hot and humid air almost takes my breath away. So far I have never had such a strong need in any African country to quickly get back into an air-conditioned room. The locals apologize, but this is the hottest time of the year.

In **Cotonou** there is a constant flow of cars in the morning and in the evening and an even larger number of mopeds in between. Nevertheless, European cynics sometimes call this town a village.

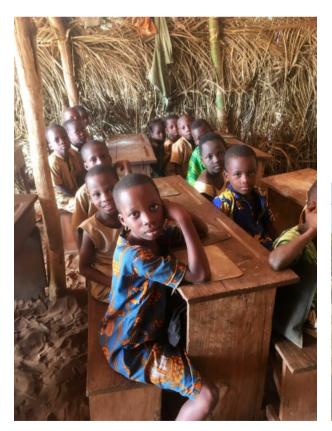
Benin is with 110.000 km2 and 11 million inhabitants in Africa a **small state**. However, 50% of the population is younger than 18. In 1975 the government changed the old country name Dahomey after a bay in Benin. This says a lot about the internal conditions of the numerous ethnic groups. It was easier to agree on a "foreign" name than to grant a tribe a privileged position.

This can still be felt today in school lessons. After the government combined 300 dialects and **tribal languages** into regional groups and had the largest number of them taught, many parents pick up their children from regional lessons. They say I pay the same taxes as my neighbour. Why should I use it to finance his language?

There is something else that plays a role in the attitude towards the **French language**. I heard a young man say: "The French language gives me power. I can go north, east and south and people everywhere understand me. I can move effortlessly in the worldwide Francophonie. I can speak French and think African".



The previous school of Adingnigou



Left: Primary school pupils look curiously at the foreign visitors.

Sale of charcoal on the roadside. It is the most common fuel In the cities.
But a lot of forest is cleared!





Solar cells are now sold on all roadsides.



One advertises with "Germany Quality - 25 years". However, the type plate only confirms that this product complies with the guidelines of the "International Electrotechnical Commission"; it does not originate from Germany.

This salesman sells 100 Wattpeak for 61 €. In Germany this power currently costs 130 €.



The Steinhagen Citizens Committee in NRW donated a new primary school for the village of Adingnigou.



In the neighbouring community there is a school of Chinese Beninese friendship.



The construction of latrines is currently the largest construction project at many schools in Benin.

The soil in coastal Benin is fertile. About 70 cm are rooted. This is the stripe in the middle of this picture. The red colour indicates a high iron content.



#### II. In the north of Benin

**Parakou**, the unofficial capital of North Benin with an estimated current population of 200,000, lies north of a mighty granite sill that moves in a west-east direction. Their rocks are rounded and polished, they must have been under water for millions of years. In many places the bare rock forms flat ridges that remind one of the landscape of Finland.

The soil around Parakou is hard and only shallowly rootable. A country like this can't feed many people. The heat is more bearable, drier and interspersed with cooling gusts of wind than in the Atlantic coastal region.

When I enter our hotel in Parakou, I immediately hear the triple call of the African cuckoo, geckos scurrying through the garden. The hotel "Les Routièrs" is in a French colonial mood. It has already seen better times. Only drops come out of the shower. After a short while the electricity is out. Parakou has a little Frontière character; behind the flickering heat, the vastness of the land mass of Africa can be sensed. The hotel is also called "Les Routièrs", the **long-distance drivers**. An uninterrupted chain of trucks rolls to Burkina Faso and Niger and from there back to the coast. Probably half a hundred broken down trucks we saw on the way to Parakou where the drivers tried to get the freight back on the road.



Cotton truck to Niger. Everything rolls on trucks from the coast to the landlocked countries.

8



Saudi Arabia finances mosques in every village.

# III. the village of "femmes transformatrices" - women who transform something into products

The village **Boukoussera** (pronounced: bukusera with emphasis on the "a") is located 40 km south of Parakou on the western edge of the 30 km2 large "Forest of Tchatchou". The village elders proudly point out right at the beginning that their ancestors planted and protected it, not the government.

Boukoussera lies in the tribal area of the **Peul**, a shepherd tribe. The 1,500 inhabitants keep 800 cattle, about the same number of sheep and numerous goats. Their cattle belong to the West African regional breed. They give two to three litres of milk a day. The Peul of course also use the meat, but the most important source of income for the men here is the live sale of cattle.

The village is spacious, almost a scattered settlement. The areas around the property as well as around the school and sports field are swept clean. But the spaces between them are obviously no man's land; they are littered with **rubbish**. The idea of a waste collection at central places probably does not exist.

In a well-kept building, the women process the yield of the **cashew trees**. They stand everywhere, they are very dominant with their mighty crowns and large elongated round leaves. Cashews carry combined fruits of small apples and nuts. Many hands are needed to collect the harvest. The apples are then washed and pressed; the juice is filtered and heated to 90 degrees. The apples are only bottled in 0.25 litre bottles because they are the best for selling. The press cake is given to the animals. The women use liquid gas bottles for heating. They want to get away from this because the bottles have to be fetched from the city on mopeds for more than 10 km. In the future, a biogas plant will heat the pressed juice.

The majority of women, however, were not yet aware that biogas could be used for this purpose, also for cooking. But they react very vividly and say "The young people hate to go into the forest and chop **wood!** They have to do it themselves and often come home too late to cook. In addition the firewood becomes scarce. My question if they prefer small biogas plants for every household gets clear approval. The government also demands that each family build its own latrine and that all have personal mobile phones.

In Boukoussera there are two government investments, a **mobile phone mast** and a brick **pedal well**. Even girls as young as twelve years old, heaving 25 litres of aluminium bowls on their heads, carry them up to 1,000 metres home in an admirable position. Fetching water is a full-day job!

Finally, everyone meets at the meeting place under a huge mango tree. I enjoy the cooling breeze, but also the heat is drier and much easier to bear than in the humid coastal strip. Our delegation is sent back on their journey with milk and millet porridge. The mildly sour taste is a delicious refreshment in the dry mouth.



Clay houses with an exterior plaster of lime make the hot climate of Benin bearable.

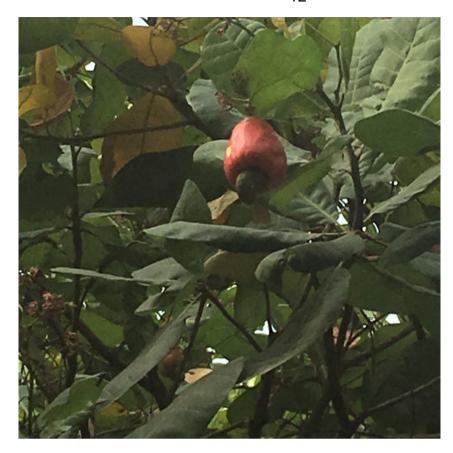


Cooking takes place outdoors.

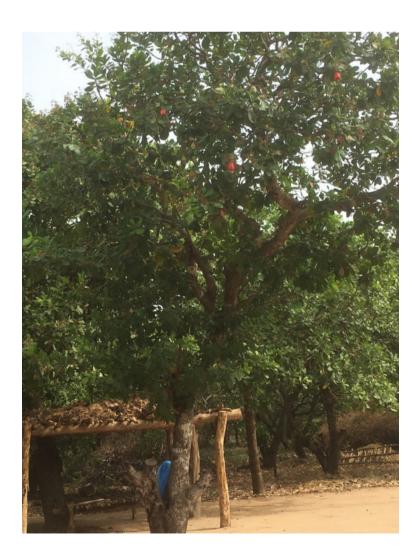


This is what the typical stove looks like: A clay frame.

The wood fire burns under the pot.



With the nut downward, the apple-fruits of the Cashew hang in the trees.



A cashew tree, Cajou in French. The bright red apples indicate that the time of harvest has come. A Chashew apple. The nut has already cracked out here. These fruits are processed into a high quality juice.

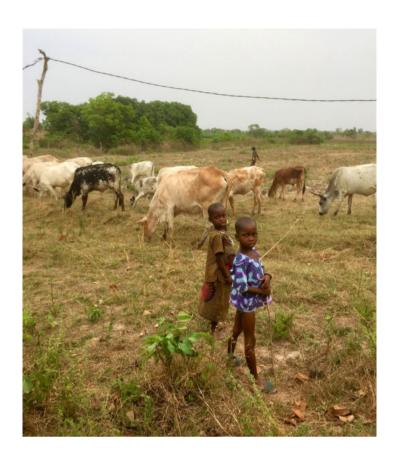


These countywomen from the village of Boukoussera in the sparsely populated northern Benin sell the high-quality juice as a delicacy. They confidently show their product to the Energy Commissioner of the German Development Ministry. In future, the apple press will no longer be operated with liquid gas, but with biogas from waste and crop residues. The electricity is to come from a solar cell.





The cashew juice is made entirely by the women of the village themselves. The sale of this high-quality product in 0.25 litre bottles is going well. The entire added value remains in the village.



Even the youngest of the Peuls tribe (pronounced: pöl) learn to herd cattle.

In the yam root fields the earth is piled up like a pyramid. As soon as the green sprout shoots through, the root can be excavated.





This is manioc, a spurge plant. The starchy tubers grow underground. The protein-rich leaves are used in West Africa for soups and salads.

The stems are simply replanted in the soil.

"Nothing is lost from manioc," the farmers say. Although the plant comes from South America, it is now deeply established culturally in sub Saharan Africa.

The women in the villages process manioc tubers into ready-to-use flour.

The picture shows a market stall on the side of the road with manioc flour and regional juices.





This is the traditional draw well. The water is lifted with a leather bag on a 12 m long rope.



The modern pedal fountain from Boukoussera.

The women heave 25 I aluminium bowls on their heads and carry them up to 1,000 m home in an admirable posture. Fetching water is a full-day job!





This countrywoman is proud of her vegetable garden.

### IV. Poverty and worries in the farmers' village

The way to the next village leads as a worn out sand track along the barbed wire fortified and almost 5 km (!) long border wall of the regional airport Parakou. Monnon is a village of the Bariba tribe. They are pure farmers; they do not keep ruminants. I only see chickens in the village.

Right at the beginning, the ubiquitous poverty here strikes us. A lot of rubbish is lying around, although they have at least a central pit for it. The rotten and gaping teeth of already young people shock me. Some children have bulbous bellies because of one-sided nutrition. The houses have mud walls and tiny windows. I learn by the way that this is supposed to keep thieves away!

After the tour everyone meets here under the mango tree. The men of the village council sit opposite us, the women sit apart.

Field work is a man's business. They produce corn, manioc, cotton, millet, cashew and yam roots. They sell part of them. But this does not bring enough money to buy better seeds for "mass production". They leave the harvest residues in the fields. One says "We don't know what we can do with it. Sometimes Peul come and graze over it. We burn the rest." A single Peul lives in the village. When he is introduced, he rises politely, but otherwise remains silent.

When I ask them whether they would rather work the crop residues into the soil or collect them for biogas, they say "Both! The wood is getting scarcer and scarcer. At this point the village chief waves the women over.

The women say that the firewood is no longer enough. They already have to go to other districts to collect the wood. But there they are chased away. If it is possible to bring a load of wood together, it costs 5,000 CFA (7, 63 €) to transport it to the village with a rented truck. Therefore they would rather collect crop residues and cook with biogas. But they have never heard that this is possible.

They produce manioc flour, soy cheese, mustard and the healing ointment Schibuta. They need a lot of water for this. At the same time, the village has more and more children. They

have to go to the water pump at 5.30 a.m. in the dark. But there are often already women from other villages. The water is fetched all day long. They ask to at least make it possible for them to cook with the harvest leftovers, if there are any. I offer them the prospect that Sakiratou Karimou, who had constantly translated into the local language, and the GIZ employee Bagoudou from Parakou would come back to them. They were visibly moved and grateful. At the end, they gifted our delegation with a selection of all their products.

At 15.00 o'clock we leave again. The thermometer shows 39 degrees in the shade.



The idyll in the village of Bariba is deceptive. Outrageous poverty, little opportunity for personal hygiene, rotten teeth at a young age, no privacy. Right in front the stove; left the wooden barrel in which the women crush manioc and corn.

Ball bellies in children are unfortunately still common. They are the result of a one-sided diet. For days they are given the same food.



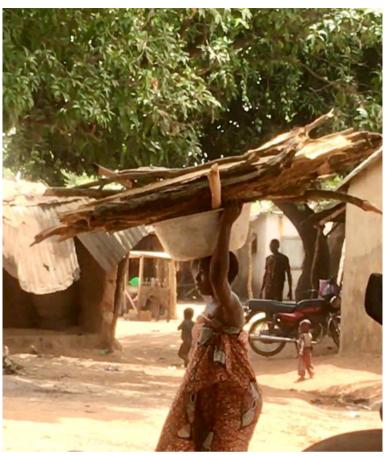


The eleven-year-old Bariba girl has to take care of her little brother during the day, here washing dishes and scooping water from the village well.

22



Unlike many other villages, this one has a central waste pit. There is no municipal waste disposal in the countryside.



Collecting firewood is the task of women and children.

But they have to go further and further, often more than 10 km, to find the needed quantities.



While I sit at the council table in Monnon, children with bundles of wood come back from collecting.



Josef Göppel (centre) at the table of the village council of Monnon in the West African country of Benin. There is an urgent problem. To the left a GIZ employee. The women can no longer find enough wood to cook with. Self-built biogas plants made of clay bricks are now to help. Enough gas can be produced with the waste of people and domestic animals as well as crop residues from the field. An energy engineer trained in Triesdorf in 2018 wants to manage this. The women of the village say that then the young people here will like it better again.

Photo: Ruth Atchoglo

In March the mangos ripen.

This man harvests the fruit with a stick.





On the edge of the dry savannah, it is common for farmers to pile up the crop residues and burn them.

On the other hand, the women can no longer find enough wood to cook with.

In the future, the easily transportable crop residues are to become source materials for the village's clay construction biogas plants.

### V. Disappointment at the University

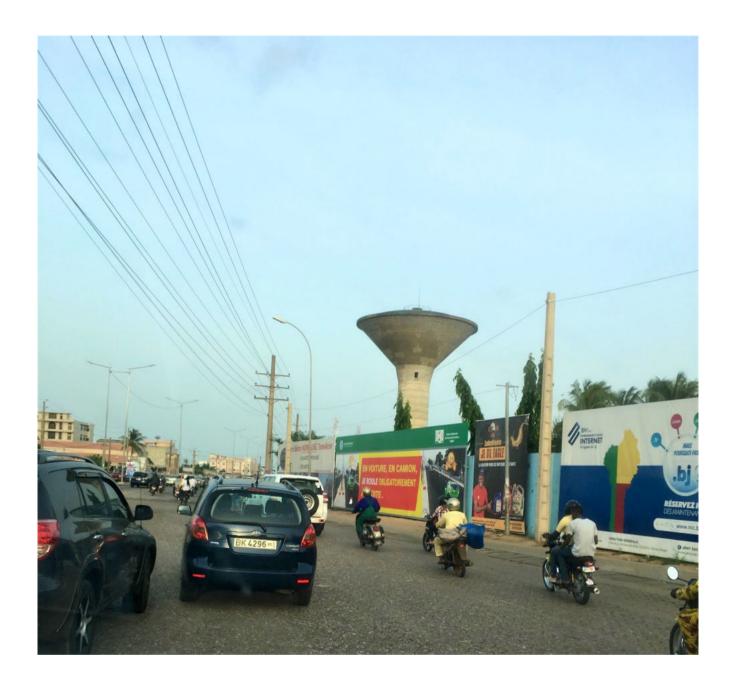
After the overwhelming impressions in the two villages, the conversation at the University of Parakou is a bitter disappointment. Although I describe the living conditions which I found, three of the four conversation partners devoted themselves to their mobile phones. When I suggested that **Sakiratou Karimou**, who was sent to Germany by the University of Parakou for the 2018 BMZ qualification course, should now present her ideas for improving the living conditions of the city's rural environment, the **National Coordinator** of the ProCIVA project at the Benin **Green Innovation Centre**, who had been listening attentively so far, came forward. He said that before Mrs Karimou spoke, he had to point something out. She first developed her idea for microbiogas plants in Germany. In the Green Innovation Centre Benin there is no competence in biogas.

I then address again the massive problems in the agricultural village of Monnon.

The crop residues are traditionally collected in heaps and burned. The ash nests remain lying on the ground. Organic fertiliser is not available because the Peul cattle breeders only graze sporadically on the fields. On the other hand, the women of the village can no longer find enough wood in their own district to cook. They therefore increasingly go to foreign districts. From there, however, they are chased away with sticks. That is why they would like to carry their own harvest residues home, because they are lighter than wood. Sakiratou had explained to them that in the biogas pit a fertilizer was left behind which could easily be placed in baskets on the field.

I called for **more demand-oriented action** instead of offers related to the area of business and that had been devised in Europe. The Green Citizen Energy Programme can and must respond to the respective life situation.

At the end of the discussion, the representatives of the universities approached me with a wish. Germany should finance a further training for master graduates in Parakou as in Triesdorf. Then competence would emerge.



A lot of young people in Benin want to get started. They prefer perspectives in their homeland to a departure for Europe. With the Gesellschaft für Internationale Zusammenarbeit (GIZ), Germany has the largest operational organisation of all industrialised countries at its fingertips. However, it has to work more demand-oriented. European offers related to specific sectors do not affect people's life situation.