

# Vijana Wetu Permaculture Study Trip to Zanzibar, 1. – 9. March 2020

By Tove Bang, chairlady of Vijana Wetu- Denmark



Max and Tove from Vijana Wetu- Denmark and Derrick from Vijana Wetu- Kenya left Kisumu, Kenya on Feb. 29th 2020 to travel to Zanzibar with the purpose of getting firsthand knowledge about permaculture in Zanzibar and collect inspiration for our own project, Banda River Permaculture Center in West Kenya. We visited three permaculture sites. The first one was the Practical Permaculture Institute Zanzibar (PIIZ). The second site was Fumba Town Permaculture Service Center and Fumba Town New Settlement. The third site was DADA Permaculture Farm in Matemwe. It was good to see how permaculture principles can change the environment pretty fast in the lush tropical Zanzibar climate, and give good outputs of different kinds. Especially the last farm impressed us! We found that they have accomplished something big with great enthusiasm and a lot of hard work, and many people benefits.





## Visit to the Practical Permaculture Institute Zanzibar (PPIZ)

PPIZ is located south of Stonetown (the old town, which is also part of the capital, Zanzibar City), and Derrick and Tove took the bus there. We were greeted by Laura Maier, a German woman who is the manager of the site, and we were shown around by Ruben, a young German, who had been volunteering at the site for six months. We saw forest gardens, nurseries, composting systems and soil improvement, poultry and goat holdings, amounts of ground cover and climbing plants, composting toilet, water systems, (own well and rainwater collection), gray sewage treatment plants, and an enviable kitchen.

PPIZ has been around for six years, and it is impressive as plants have grown and work well as a forest ecosystem. However, in Vijana Wetu we are much interested in medicinal plants, and we were a bit disappointed that PPIZ does not seem to have particular much focus on these issues, and we also found that the focus on outward activities in relation to the local people were low, but maybe we took it wrong because the information level was low at that specific time, when we were there.

There are 7 employees, who receive wages. Some income is from the holding PDCs (Permaculture Design Certificates), which are offered in both Kiswahili and English. The place is not self-sufficient, and the goal is to demonstrate permaculture. A PDC currently costs \$ 850, including lodging and catering. Permaculture teacher is John Elaizer.







## Visit to Fumba Town

### Fumba Town Permaculture Service Center

Further south on the peninsula lies Fumba Town, a huge private modern construction project, with outdoor spaces landscaped with inspiration from permaculture. When we left PPIZ, the day still had free hours, and Derrick and I took two motorcycles out there. We had heard about the place and we wanted to explore more. Fumba Town Service Center is a large permaculture garden, which produces plants for the construction project and introduces e.g. poultry farming and waste sorting and recycling. Although we did not have an agreement with one of the two directors of Fumba Permaculture and New Settlement, Franco Göhse and Bernadette Kirsch, we still managed to get a great experience, when we contacted a young German landscape architect who was practicing on the spot. He was just having lunch, and he was so kind to take us around both in the large permaculture garden and in the futuristic new settlement area, where the outdoor areas are inspired by permaculture solutions.







Fumba Town New Settlement



The sign says: “One of our core focuses for landscaping at Fumba Town is soil building. The town is build on bulldozed coral rock, that is low in organic material, fertility, and bad soil structure. Moreover, moving and buying of soil in Zanzibar is illegal. Faced with these challenges, the problem became the solution. Fifty percent of the waste in Zanzibar is organic, that can be turned into soil. By layering organic materials together with charcoal, sawdust, cardboard boxes, paper etc. and letting the decompose, we are imitating nature’s way of soilbuilding. It provided our landscaping plants with nutrients needed for growth, and will continually develop our soil quality as we continue. We also employed on earthbag building technique to create the various islands in this park. This is a way of reducing the use of fossil fuel by choosing an alternative method of building technique.”







construction company Volks.house. They aim to produce and deliver high quality sustainable housing solution to Africa with minimum usage of nonrenewable resources. They specialize in prefab/modular houses, timber based and prefabricated. Volks. House has invested in building the first prefab house factory and assembly line adjacent to Fumba Town, where raw materials are crafted and assembled to modules which are then assembled at the building site. The houses are designed to be fire resistant, water/moisture resistant, sound insulated. Timber has possibly the longest life cycle of any material in human use. It is easy to recycle and timber can be used over and over again for host of different purposes. Using timber to build homes create a carbon neutral atmosphere and creates a clean healthy air. Timber comes from natural resource which is renewable, energy efficient and recyclable. With our prefabricated timber technology at Volks.house, it provides a variable alternative to concrete with aesthetics, low embodied energy, renewability and locally manufactured.”



We could not quite see the construction with wood, as mentioned in nice terms above. By contrast, we were impressed by the beds built in the bare coral cliff for the city's edible plantings, which at the same time serve to collect rainwater. We also found that the outdoor pools and the playground, which were built with 'earthbag' technique, were smart.





**CORAL FOREST REGENERATION**

2010

Natural resources are the key to future prosperity. The natural environment must be protected and repaired.

2020

**FROM SOME TREES TO FOREST TO AGROFOREST**

**Growing a forest for food, shelter, and medicine**  
 Natural ecosystems are resilient and can provide the inspiration to establish equally multi-functional systems to meet humans' needs.  
 We are using indigenous plants to help regenerate the degraded landscapes. Whilst those are best adapted to local conditions, they can be used both as pioneer species to accumulate much needed organic matter for future farming or to restore natural habitat for wildlife.  
 In restoring natural systems, negative weather patterns can be reversed, soil rehabilitated, and positive output maximised for both local inhabitants by obtaining larger yields, as globally by sequestering carbon at the highest rate.

This forest can become an example for other communities who have understood that their livelihoods and a healthy and productive ecosystem are inseparably linked.  
 In our case, we allowed the natural forest to regrow taking out only few invasive non-indigenous species. In other words, instead of investing money and work we invested in time and let nature do her work.  
 However, depending on the communities' objectives, a natural system can be combined with selected cultivars as in a permaculture food forest.

These satellite photos document the evolution from degraded coral rag into a natural forest and living ecosystem unleashing the potential to turn the sun's energy into food, fuel, habitat, and natural beauty.

2007 2016

**Observation of the natural patterns and cycles of nature helps us to make better plans**

We got a link, an email address, when we visited PPIZ to a woman, Antje, up in the North Island, who was mentioned to have recreated a large area from bare rock to lush forest with permaculture. Luckily she answered the next day and we left immediately.

We found Dada Permaculture Farm quite easily when we got out of the dala-dala (an open minibus), and we met the women's group, as we were told, and Antje Foerstle came to greet us.

We felt her enthusiasm right from the beginning. We introduced ourselves and our Vijana Wetu project, and then she started to talk about her extensive project. She and her husband, Rainer Vierkoetter (Youssuf) are Germans and they have lived in Zanzibar for 27 years. Antje is an artist and she has worked deeply with permaculture throughout the years. In 2002, after coordinating with the authorities on a suitable place to develop permaculture to a greater extent, they were assigned to a few places, either down at Fumba or in a bare and rocky area three km from the coast inland at Matemwe up the north of the island.

Over the years, people (and their goats) had emptied vegetation out of the Matemwe area and the only vegetation left in the rocky corals, that form the underground of Zanzibar, was some baobab trees, bits of grass and a few tree stumps. Antje and Rainer saw the biggest baobab, a huge ancient tree, from the road at a long distance, and they knew immediately that here they wanted to settle and rebuild the forest. They leased the land straight from the community under the conditions that they would not import work force from the outside and that they would regrow the forest. One hectare of the same land is leased additionally from the government for the purpose of building their house. (In this way both parties receive some money in return for letting them use the land).

Antje and her local helpers have now rebuilt the area and created a fully grown forest that sets an example for many in Zanzibar and in East Africa!

Antje says she is a 'bush lady', she loves to live in the 'bush'



## Antje has divided the 5½ hectares into five sections

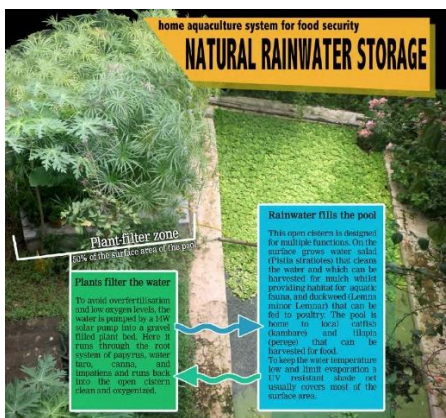
**Area 1: (Zone 1 - 3, arrival)** Production house for the cooperative, the women's group, Upishi Mama Matemwe. Here they can meet and produce jam, soap, wicker and baskets, spices and more out of what the forest can provide. The women's production is sold in the DADA Stonetown store, and they have an income-generating activity that can help feed them and their families. The house is also used as a classroom for teachings in permaculture and other relevant subjects of income generative activities, sufficiency, climate change resilience and sustainable lifestyle.

Antje says: "Unfortunately, we cannot yet fully sustain on what we make, but we are working towards it. From the 46 women, 4 are working full time receiving salaries. The rest of the group only flocks in once per week at different times (they said in the beginning that they could not afford more time as they had other work), and they are paid for what is produced. Then, at the end of the year (at the beginning of the rainy season and the end of the tourist year) all profit (except for savings of course) is to be divided equally among all coop members. However, so far all has been invested in bringing up workspace and business. They were just at the point of making the first larger sum this year, and now we have corona and they are not allowed to gather, nor do they have a market. It is such a shame. But we are growing food for the families."





**Area 2: (Zone 1)** The family residence, a two-storey house, traditionally built of mined coral and limestone, but they also used some steel and concrete on recommendation of the fundis, the craftspeople from the village. Antje and Rainer moved in in 2008, when they had nearly finished the house (they did like their neighbours, living in one room, while doing the rest of the building. The house has internal staircase, which provide natural ventilation, rainwater collection under the floors and overflow pool with fish and plants, compost toilet, delicious outdoor bath, a myriad of edible plants around the house and on the terrace, flat roof with solar cells and an overview of the entire project's large forest area and the blue, blue Indian Ocean.





**Area 3: (Zone 2)** Nurseries, terraces, permaculture workspace, chicken farm, edible plants, forest garden with many fruit trees.

Most of the nurseries are placed along the paths so they can be inspected and taken care of, whenever passing from one activity to the other in the working area.





**Area 4: (Zone 4)** The area with baobab trees, also the giant elder (maybe more than 500 years), a recreated forest area.

The little baobab banda was the house and office of the first volunteer. The baobab banda is to be turned into a study room/library with adjacent forest for reference, but not for lodging. Some of the neighbours have invested in extra rooms that the DADA Permaculture Farm will use for lodging, so the income from that and the interaction can stay in the community from the beginning.







Matemwe is known for its many baobab trees (*Adansonia digitata*) which can live for hundreds of years. We have come to understand that baobab trees can be relied on in building resilience and food security.

To promote their use, we have taken fruit, leaves, kernels as main ingredients for innovative Dada branded products.

To date there are ready-to-use chutney, jam, candy, syrup, soap, body oils, face mask, foot and bath salts, and fruit and leaf powder is available as cooking ingredients and nutrition supplements, to be followed by high-protein kernel flour once a production unit is in place.

Young baobab leaves have a pleasant nutty flavour and are extremely high in nutritional value. They can be eaten in salads, or as a vegetable. The younger the tree, the more palatable the fresh leaves are.

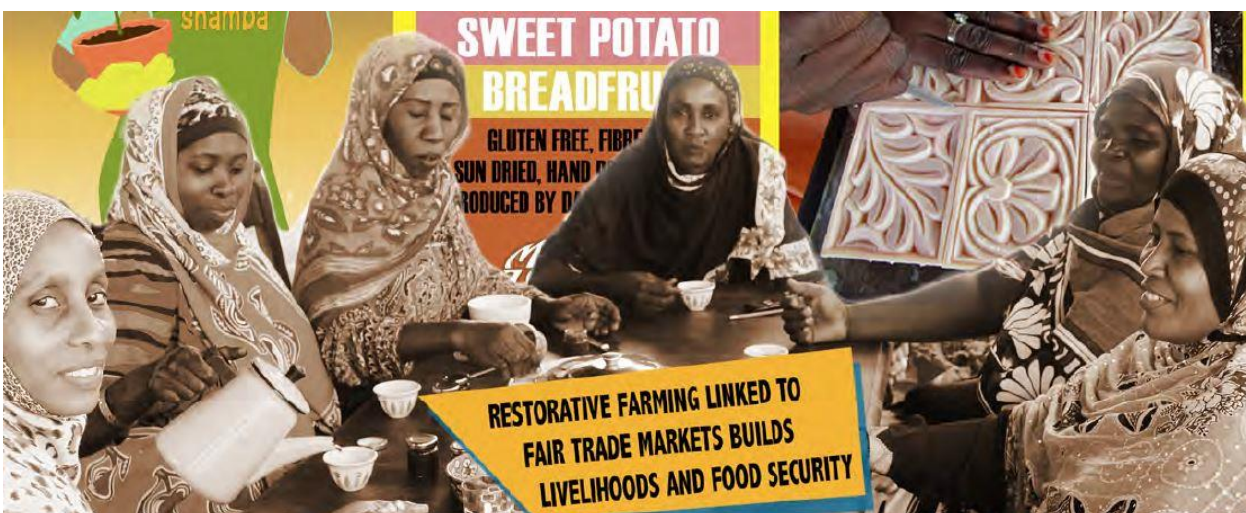
**Zanzibar's most innovative Healthy Food & Cosmetics Producers**

visit the DADA Shop in Stone Town Hurumzi 416

Did you know that baobab is edible and highly nutritious? The leaves have a nice nutty taste, the fruits can be dried and powdered, and used to make jam, chutney, face masks and more!



Antje grows a lot of new baobab trees and the women's groups make many baobab products that are marketed in the DADA shop in Stonetown.







**Area 5: (zone 5)** is an overgrown place that is left to itself behind the dwelling for future use. Antje wants more oil palms for soap making and they are on their way in the nursery. We noticed that there were not many coconut trees in DADA Permaculture Farm. Almost all coconut trees planted over the years were eaten by termites, except for the forest garden opposite the chickens where there are 3 that have survived. They have just planted 10 more south of our house (future windbreakers) and hope that now they will root in the improved soil before the termites go hungry.

The relatively undisturbed places in zone 5 are also habitat for snakes, such as forest cobra and green mamba (poisonous), sand snakes, house snakes, file snakes, green forest snakes, egg eaters and other benign snakes.

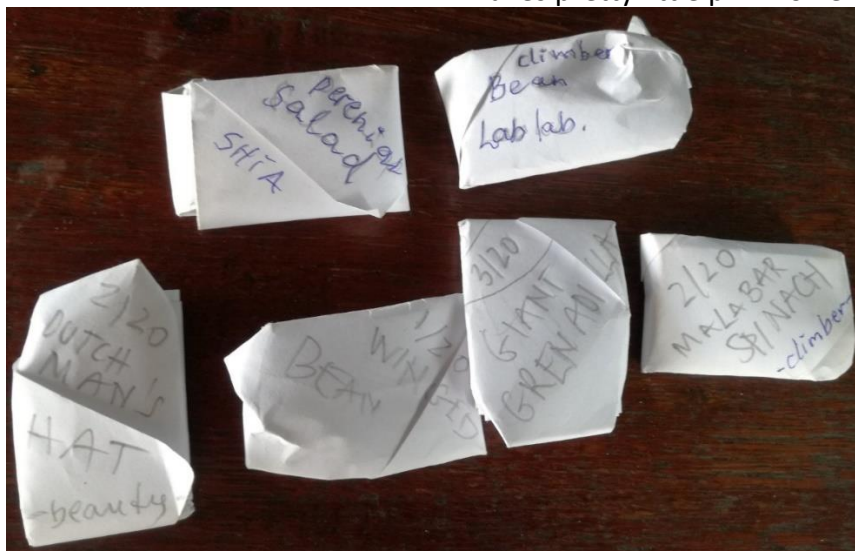
If the snakes have a place to live, they won't bother people, says Antje. "You are not their prey"!



Derrick got a gift from Antje, a yam. It is a funny root tuber that grows like a climber. It is similar in taste to potato, but it becomes huge and can satisfy many. You simply plant a piece of the root somewhere where it can climb, and then it grows merrily. We called it 'baby'.

Derrick also got seeds to take home to our Banda River Permaculture Center. We asked for climbers and we got:

Lablab climber bean, Malabar Spinach (climber), The Winged Bean, Giant Grenadialla (climber from the passion family), Dutshmans's Hat (beauty). The perennial salad is the Jewel of Opar, it also makes pretty little pink flowers in the afternoons.





And yet we managed to find our way into the heart of permaculture in Zanzibar. Antje Foerstle, who does not make a big number out of herself, she has (well supported by her husband) a priceless importance to all permaculture on the island and in East Africa, and she is happy to pass the credit on to others. She is truly a woman who lifts her fellow human beings. Here we would like Vijana Wetu members to take PDCs!



...And then we walked the three kilometer to the beach and jumped in the warm sea and romped in the white coral sand!





## Waste Recycling in Zanzibar

By Derrick Omondi, Vijana Wetu- Kenya

The majority of glass bottles, metallic and plastic wastes on Zanzibar are left by tourists visiting the Island.

Not being biodegradable, these wastes interfere with the natural environment, littering roads and villages. But it seems the citizens have created awareness on how to use the wastes effectively to generate income. Especially in Malindi Guesthouse, where we lived, we saw great ingenuity. Designed upcycled products are handmade from wastes, such as original home accessories, furniture and lamps, terrazzo bowls and cups to use at stationary or bathroom utilities. In the bottle brick, part of the sand, cement and gravel is replaced with waste –glass, resulting in a brick for local usage that is twice as strong as regular brick.





