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”Tabasam Kwa Maisha – En Kreativ Skola i Tanzania”
”Tabasam Kwa Maisha – A Creative School in Tanzania”

Examensarbete inom arkitektur, avancerad nivå 30 hp
Degree Project in Architecture, Second Level 30 credits

23 maj 2013
"In what way can the school architecture contribute to and help to enable a creative and inspiring school environment in Tanzania?"
**BACKGROUND INFORMATION TANZANIA**

Tanzania is an east African country with a population of almost 45 million people from 120 different tribes. 80% of the population live in rural areas and almost half of the population is under 15 years of age.

Gold is the biggest export product, with Tanzania being the third biggest producer in Africa, after South Africa and Ghana. Other export products are minerals, industrial products, tobacco, coffee and cotton. The country mainly imports machines, vehicles, fuels and building materials. Although the balance between import and export is very uneven, Tanzania is heavily dependent on financial aid and loans to be able to stabilize the balance. Tourism is an increasing income source as the country among other things offers to see wildlife during safaris, climb the mountain of Kilimanjaro and visit the beaches of Zanzibar.

The country is heavily affected by HIV and malaria. Another problem is the high illiteracy. After the independence from the United Kingdom in the early 1960’s Tanzania started to invest heavily on education. This made that the illiteracy decreased and in 1987 90% of the population was able to read and write. Although in the 1990’s the economy went down which affected the school system. Less people could afford to send their children to school and in the middle of the decade less than half of the children were able to go to elementary school and only 5% could continue to high school. This resulted in an increase in illiteracy again.

When Tanzania got some of it’s external debt written off in 2001 the government could yet again invest in a good educational system. In 2001 the school fees for primary school were abolished, hence making primary school open for all children. In 2003 9 out of 10 children started school, and the goal is that every child in Tanzania will go to school by 2015.

**SCHOOL SYSTEM**

The education system is divided into several stages. Children of 5 to 6 years of age enter a 2 year pre-primary education followed by 7 years of primary education. After that the children can go to secondary school that is divided into two parts. To start with there are 4 years of secondary school ordinary level education for ages 14-17, followed by a 2 year of secondary advanced level. After secondary school one can enter 3 or more years of university education.

There are public primary schools that are free for all children, and there are private schools that cost. The public schools have school classes of 45 children per one teacher. A problem is that this is sometimes not followed, resulting in classes of around 60 children or even more. This makes the classrooms overcrowded and the teacher cannot pay attention to each individual. Because of this it is easier for the teacher to write on the black board and let the children write if off to learn. The children are in that way only taught by repeating the teacher, not by thinking and analysing themselves. The private schools do often have smaller classes, but as they cost they are only viable for a small part of the population.

**MATANANA**

In the poor Iringa province, around 100 km southwest of Iringa there is the small village of Matanana. The village is positioned almost 2000 meters above sea level and has around 2000 inhabitants of which a huge amount are orphans. This part of Tanzania is one of the worst affected by AIDS, and another big problem is Malaria. In several villages in the area more than half of the population has died of AIDS. When one or both of the parents pass away the children are left with their grandparents. As these are often very poor and their health is lacking they are not in the position to take care of their grandchildren.

**Ewout van Alphen and the Orphanage Moyo Kwa Moyo**

In 2004 Ewout van Alphen made a visit to Matanana. He saw the need for help in the village and in 2005 he decided to start the organization Yatima Heart to Heart (yatima meaning orphan in swahili). With a background as a farmer on a biodynamic farm in Södermanland in Sweden and as an anthroposophy dance will play a central role in the school. With Ewouts anthroposophical background and Linneas aesthetic interest the aim of the school is to teach by integrating the children in practical parts. The school classes will be smaller to give every child the attention it needs.

The school compound will have several work shops for practical education and music and dance will play a central role in the school.

Since a few years back, the orphanage Moyo Kwa Moyo are cooperating with the travel bureau Volontärresor which provides the orphanage with young volunteers that get the opportunity to visit Moyo Kwa Moyo and give a helping hand. Linnea Öhman is one of them. She made her first trip to Matanana in 2009 and directly fell in love with the children and the village. She has returned to Matanana twice since then. The last time, in February 2012 she felt the urge to do more. After visiting several schools in the area and in Dar es Salaam she saw the lack of quality in the education. That is when the idea about a new school started to take form. Not only another primary school, but an idea about a new way of teaching. With Ewouts anthroposophical background and Linneas aesthetic interest the aim of the school is to teach by integrating the children in practical parts. The school classes will be smaller to give every child the attention it needs.

The school compound will have several work shops for practical education and music and dance will play a central role in the school.

A new NGO (Non Governmental Organization) for the school has been started in Sweden and the collecting of money to finance the school project has already begun. The idea is that the NGO will start up the school, but in the long run will educate motivated local teachers and let them take over the activity of the school.
DESIGN PROCESS

FINDING FORM

ORGANIC FORMS TO BRING A NEW AFTER ANALYSIS OF ISSUES, INPUT FROM LINNÉA, MAIN IDEAS A FOCUS LOUD SOUND FROM RAIN EASY ACCESS MAYBE A SMALL “SCHOOL VILLAGE”? WEEKEND OFTEN BIG EMPTY COURT

L

NO FILTERING OF RAIN WATER AND RULES I HAVE CHOSEN TO FOCUS ON:

CLASSES HANDLING OF RAIN WATER ON METAL SHEET ROOFS CONCEPT CONCERNED PEOPLE HAVE SHOWN:

FINDING FORM DURING ROAD FOR AND ADULT WEEKEND...

THE SMALL SCALE, MAYBE A “SCHOOL VILLAGE”? INTRODUCING THE RHYTHMIC ORGANIC FORMS TO BRING A NEW ARCHITECTURAL ARCHITECTURAL ANDGRASS WITH FOCUS ON HOW MANY AND FLOWS...

THE PROGRAM IN DIFFERENT VOLUMES

SIGHT LINES AND ORGANIZATION ALONG A GREEN SPINE FOR CLEAR VISIBILITY AND INSIGHT INTO THE COMPOUND

ORGANIC ROOFS - easy classroom, but without a feeling of work with corrugated sheet cloud hitting organic shaped? + Another major bonus...

STRAIGHT ANGLED ROOFS

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STRAIGHT ANGLED INDOOR SPACES

ORGANIC INDOOR SPACES

- open and change class rooms in order to work with organic shaped?

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ORGANIC ROOFS
BECAUSE OF THE RAIN SEASONS THE COLLECTION OF RAINWATER IS AN IMPORTANT FACTOR. INTRODUCING GREEN ROOFS WOULD CLEAN THE RAINWATER THAT IS BEING USED FOR COOKING. IT WOULD PREVENT SOLAR HEAT GAIN ON THE TRADITIONAL STEEL SHEET ROOFS, AND IT WOULD MUFFLE THE SOUND OF RAIN WHEN HITTING THE ROOF.

**GREEN ROOF**

- **Corrugated Metal Sheets**
- **Secondary Roof Structure: Wooden Purlins**
- **Primary Roof Structure: Wooden Beams**

**Bamboo Facade**

- **Load-bearing Bamboo Structure**
- **Load-bearing Brick Facade**

IN CONTRAST TO THE EXTERIOR OF THE COMPLEX, THE INTERIOR FACADES WILL HAVE A SOFTER EXPRESSION. BOTH WHEN IT COMES TO MATERIAL AS WHEN IT COMES TO FORM. BAMBOO IS A STRONG AND DURABLE MATERIAL THAT IS READY TO HARVEST AFTER 3-5 YEARS, HENCE BEING A GOOD SUSTAINABLE ALTERNATIVE TO OTHER WOOD TYPES. THE IRINGA PROVINCE HAS ITS OWN PRODUCTION OF BAMBOO AND THE MATERIAL IS TREATED JUST AS WOOD IS TREATED BY IT FROM BEING DAMAGED BY TERMITES. NO METAL BARS ON WINDOWS ARE NEEDED AS THE DISTANCE BETWEEN THE BAMBOO CANES WORK AS “WINDOWS”.

**BUILDING IN STAGES**

- **Stage 1**: Kindergarten Stream 1, Pre-Primary Stream 1, Kitchen, Teachers Area
- **Stage 2**: Assembly/Eating Area, Work Shops, Primary Classrooms
- **Stage 3**: The school can in the future expand to a 2-stream primary school. The play ground area will move to the soccer field.