

RESEARCH STUDY

For designing rural community libraries
and conducting building workshops in the
context of the planned Nka Arts Village

Singida - Tanzania



Raumgeschichten e.V.

Imprint



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TABLE OF CONTENTS

CHAPTER I. INTRODUCTION	4
Preface	5
Objective	5
Who We Are	5
Terminology	7
Research Design	8
CHAPTER II. NATIONAL CONTEXT	9
The Country of Tanzania	10
Short Facts	11
Mobility	13
CHAPTER III. REGIONAL CONTEXT	14
Singida Region	15
Demography	15
Literacy Rate	17
Ethnic Groups	18
Climate	19
CHAPTER IV. LOCAL CONTEXT	21
Singida City	22
Streetscape	29
Public Spaces	41
Sceneries	47
Globalization	55
Building Typologies	57
Cost Indicators	67
CHAPTER V. BUILDING SITE	69
Nka Site	70
Conducting a Building Workshop	73
CHAPTER VI. CULTURAL ANALYSIS	74
History of Libraries in Tanzania	75
Sociocultural Survey	76
CHAPTER VII. DESIGN THINKING WORKSHOP	89
Preface	90
Preliminary Ideas	92
Outlook and Open Questions	97
REFERENCES	99
PROJECT TEAM	101

CHAPTER I. INTRODUCTION



Preface

Before globalization, urban planners designed and built their environments within a local context. The design of a building was suitable for the existing conditions, it was adapted to local culture, climate and habits. Cultures, regions or tribes developed their own unique ways of design, according to the needs of the local people and the resources available. Nowadays we face a world of rapid change. Due to globalization, everything is interconnected. There is a global economy, worldwide networks, cultural exchange, and increasing mobility; even the most remote corners of the world are affected by it. Architects and urban planners working abroad, and internationally operating companies dominate the global market of the construction sector.

However, this doesn't mean that architects or urban planners should underestimate the importance of a solid knowledge of local conditions. If we don't pay attention to the intended building site, the specific environment, and the local people, we may end up with buildings which will neither be accepted nor used by the final consumers. This is questionable enough when it results in failed real estate investment, but becomes even more problematic in the area of development work where people donate their money and volunteer their time.

Objective

This research study attempts to enable designers who are not familiar with the local conditions of Tanzania, to develop better design solutions more suitable for the context they will be located in. It wants to bring awareness to the specific needs of the people, the historic context, and the unique environment we, as architects and urban planners, interact with. The study provides an introduction on national, regional as well as on local scale of the proposed Nka Arts Village site in Singida.

Who We Are

The research was undertaken by Raumgeschichten e.V., a German non-profit organization working in the field of social architecture.

In addition to the interdisciplinary team of Raumgeschichten, architecture master students from the Karlsruhe Institute of Technology (KIT) participated in the second and third phases of research. During the second phase, local students from Dar es Salaam participated as well.

The project worked in close collaboration with Environmental Foundation for Development (EFD) and Nka foundation.

Raumgeschichten e.V.

Raumgeschichten e.V., a young association founded at the beginning of 2015, engages in projects concerning humanitarian urbanism and social architecture. The organisation is registered in Frankfurt/Main, Germany and recognised as non-profit organization.

It aims to reduce the gap between universities, professional associations, and those working in the field of architecture. It focuses mainly on the topics of global architecture and sustainability, and is predominantly involved in social projects in the non-profit sector. The members of Raumgeschichten are all volunteers, hoping that their contributions are making the world more human - architecture that is ecologically and socially just, and yet retains an aesthetic standard.

Find more information on raumgeschichten.org

Nka foundation

Nka foundation is a nonprofit organization in the United States that exists to serve underserved communities in Africa. They do this by creating a network of project sites in underserved communities where individuals, groups, and institutions across the globe can come to immerse and interact with the needy communities to build cultural bridges for skills and knowledge transfer. Since 2008, Nka foundation has been running arts and mud house design projects in Ghana, Mali, and Tanzania with a focus on 'tapping local resources for sustainable development'. Nka foundation projects promote volunteerism.

Today, Nka foundation is building a network of arts villages in Ghana and Tanzania. The arts village is designed as a learning center to provide relational spaces for creative people from the region and other countries to live, work, learn, and create. Nka's rural projects therefore draw on asset-based approaches to community development by immersion in the rural community and by the mobilization of existing, but often unrecognized, abundant local resources to enable the underserved community to drive its own development process.

Find more information on nkafoundation.org

Environmental Foundation for Development (EFD)

The EFD is a non-profit, youth led, and voluntary organization registered by the Government of Tanzania. EFD is committed to providing a platform to carry out and promote both environmental improvement and practical conservation, to educate, encourage, and support the local population in environmental practice by working with statutory and non-statutory agencies. It's vision is to enable the community to be able to manage the environment sustainably.

Find more information on efd.or.tz



Terminology

Arts Villages

By building a network of Arts Villages, Nka foundation wants to provide stable places for creative people from the local region and other countries to live, work, learn, and create. In this endeavor Nka foundation welcomes design proposals year-round from architects, landscape architects, engineers, and students alike. The foundation has been hosting Mud House Design Competitions over the years as well as provided support for the winning teams to eventually realize their design proposals.

Being selected as one of the winning teams in 2014, Raumgeschichten e.V. held a ‘Mud House Building Workshop’ in the Abetenim Arts Village, the first Arts Village in the rural Ashanti-Region of Ghana, to build their winning design in 2015.

Aiming to spread the Arts Village idea across the continent, Nka foundation established the first building of the Singida Arts Village in Tanzania as the outcome of an Earth House Workshop held in 2016. One of the main goals for the future usage of the Singida Arts Village lies in the purpose of education & training in the fields of sustainable local construction and housekeeping in arid areas. In this light, the next design competition will aim for the design of a community library in the Singida Arts Village.

Community Library

A community library is a library that is accessible by the general public and generally serves the public interest as it is open to all, and available to every community member who intends to go there. In order to achieve the feat of building a true community library for the people of Singida, Raumgeschichten e.V. conducted this research. The information provided in this document is for the reader to analyze, interpret as well as to inspire the reader to draft a community library design for the Arts Village of Singida.

Tanzania

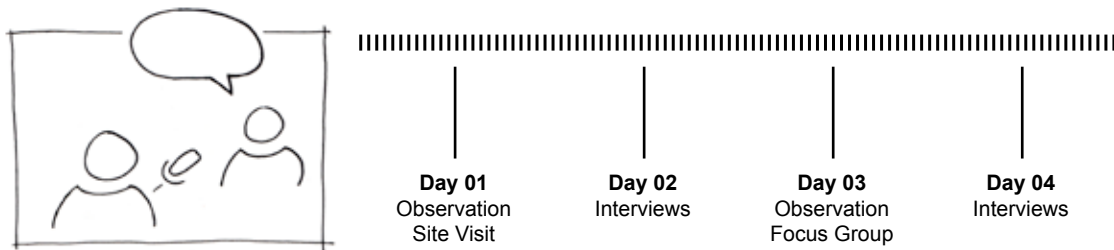
In this report Tanzania is used as abbreviation for United Republic of Tanzania as it was founded in 1964.

Research Design

This research study was structured in three phases. In the first phase, interviews and focus groups were conducted in the city of Singida, focusing on sociocultural aspects and the needs of the local people. It was followed by the Design Thinking Workshop which took place in Dar es Salaam - where an international, multidisciplinary team met over three days to rethink the terminology of common ground and public spaces, and developed initial ideas and concepts for rural community libraries in Tanzania. The third phase focused on spatial aspects, where the team observed the local context and analysed the built environment in and around Singida.

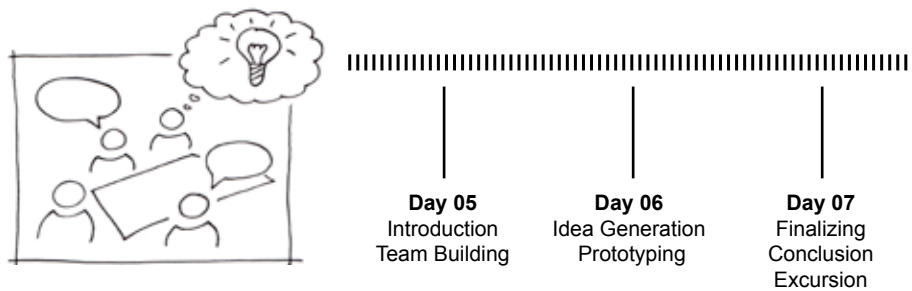
1st Phase

The 1st phase of the Design Research consisted of four days of interviews and observations and took place in Singida from 22.08.-25.08.2017.



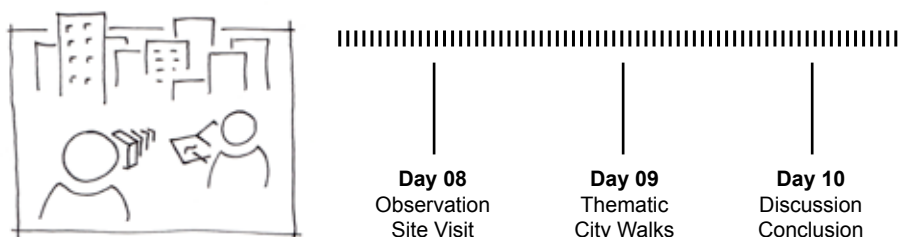
2nd Phase

The 2nd phase, a Design Thinking Workshop, took place between 02.09.-04.09.2017 and was conducted in Dar es Salaam.



3rd Phase

In the last phase, a spatial analysis was conducted in Singida between 06.09.-08.09.2017.



CHAPTER II.

NATIONAL CONTEXT



The Country of Tanzania

With wild animals, beaches, ruins, the highest summit of Africa, friendly people, a fascinating culture, and much more, the United Republic of Tanzania is one of the most multifaceted countries in the world. Tanzania, located in East Africa, is bordered by Uganda and Kenya in the north, Rwanda, Burundi, and the Democratic Republic of the Congo in the west, Zambia, Malawi, and Mozambique in the south, and by the Indian Ocean in the east. It has an estimated population of 52 million people, spans an area of 947,303 km² and has a population-density of 47.5 persons/km². With its Human Development Index of 0.531 (2016) Tanzania is ranked in the first third of the 'Low Human Development' by the United Nations.

Tanzania has a tropical climate but has regional variations due to its topography. Seasonal rainfalls are driven mainly by the migration of the Intertropical Convergence Zone. There is one long rainy season from March to May and a shorter one from October to December. A long dry season occurs between June and October. In spite of the fact that Tanzania lies so close to the equator, a large part of the country has a tropical savanna climate and most of its central part is warm semi-arid climate.

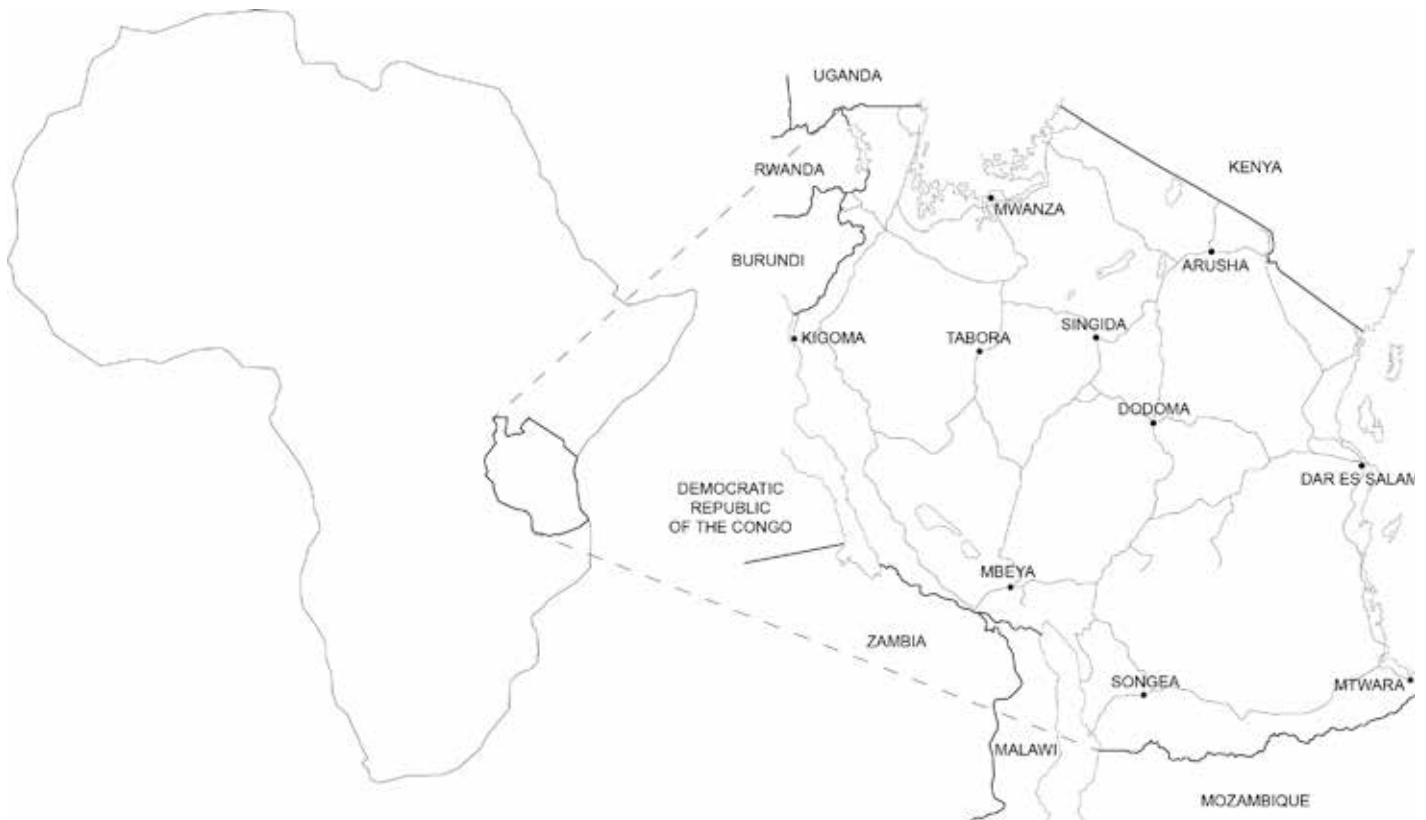
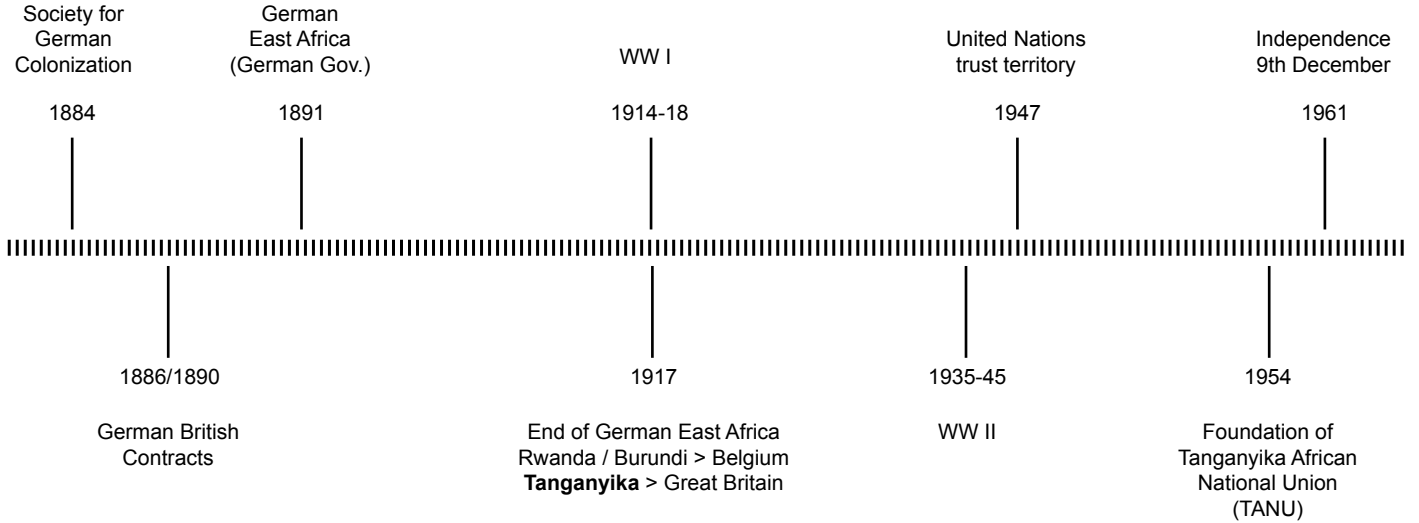


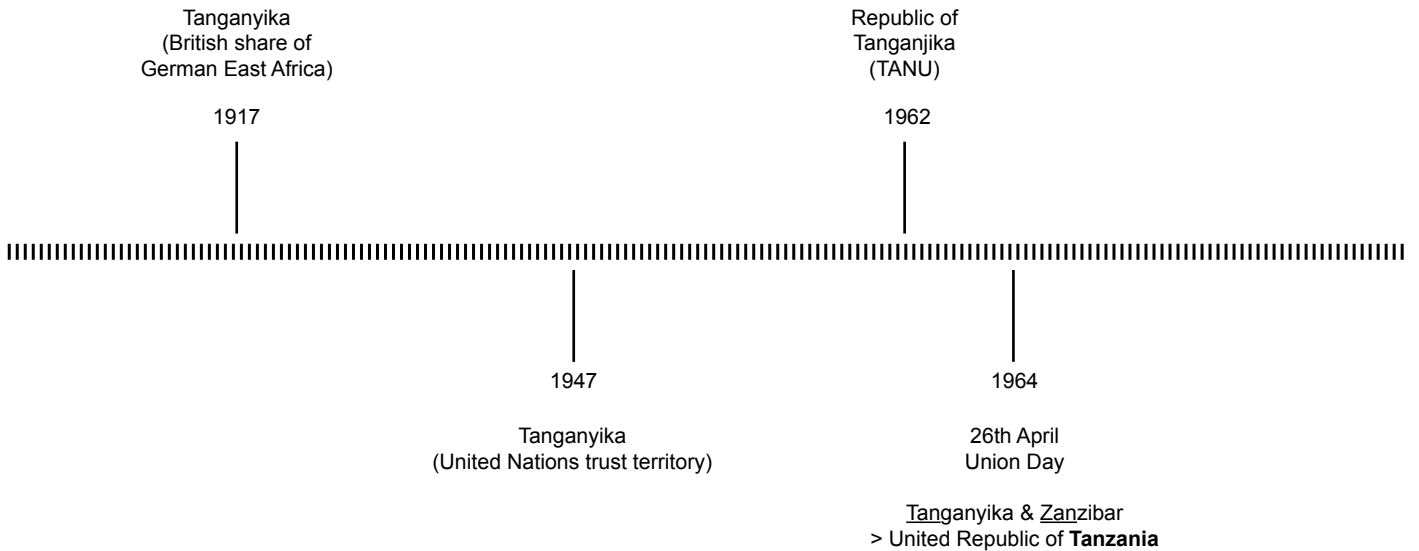
Image 01: Tanzania located on the African continent

Short Facts

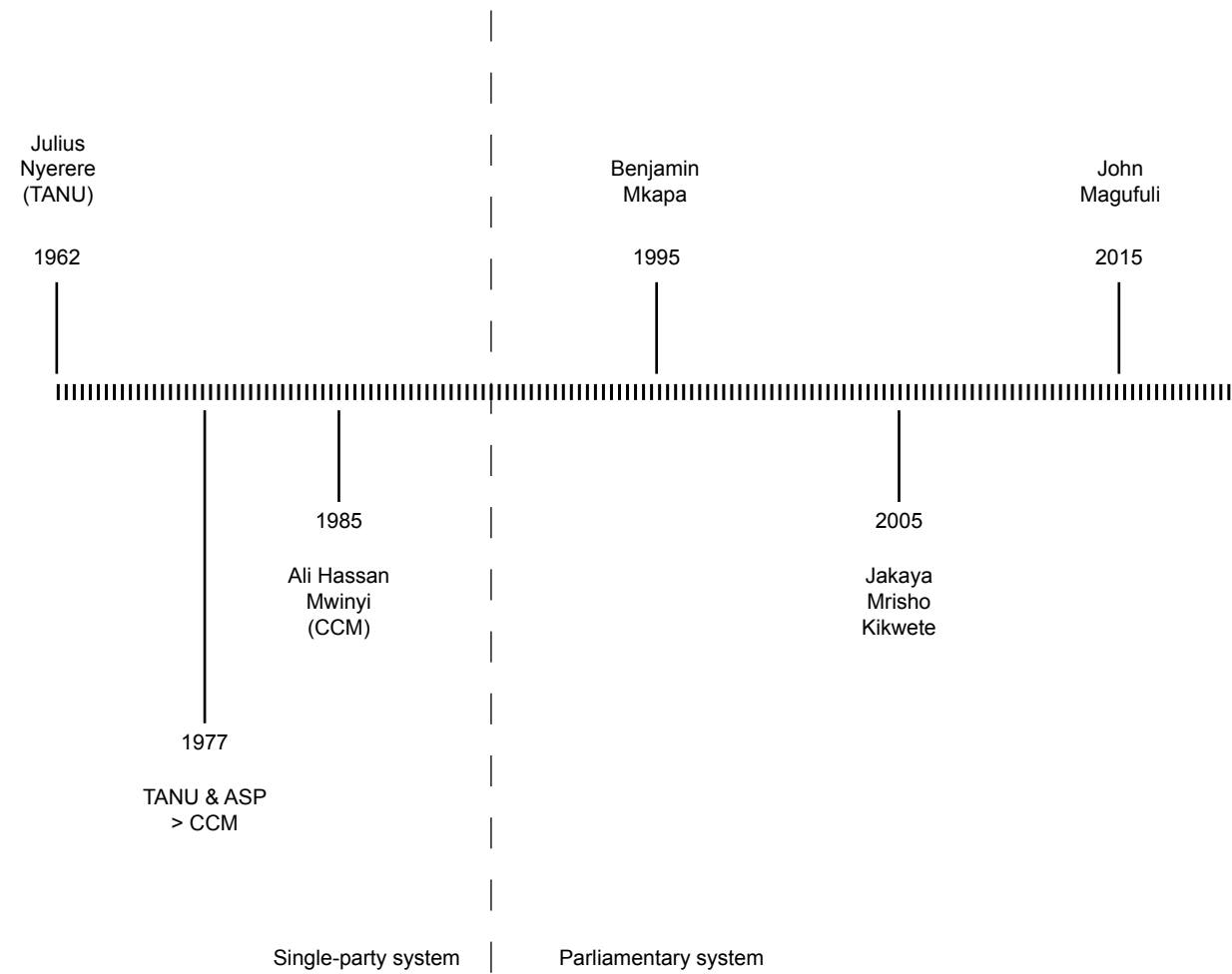
Colonialization of Tanzanian Territory



State of Tanzania



Power – Presidents of Tanzania



Main political parties
 TANU: Foundation of Tanganyika African National Union
 ASP: Afro-Shirazi
 CCM: Chama Cha Mapinduzi

Mobility

Travelling from A to B in Tanzania takes time. Distances are in general very far, and transport is slow.

Below you will find times, costs, and distances to get a rough idea of travelling in Tanzania. The most common mean of transportation are buses. Costs, especially, may vary due to the selected class of the bus. For using other kind of public transportation, bargaining with the driver is a must. Otherwise, you end up paying too much. Keep in mind that a public bus only drives during the day period. There are no overnight bus connections available due to bad road conditions.

Public transportation by train is available, but not recommended, as the network is obsolete and mostly used for freight trains. In addition, travel times are even longer than by bus.

From/to	Distance (km)	Duration (h)	Vehicle	Cost (TSh)*
Singida > Arusha	324	approx. 5-6	Bus	14,000
Dar es Salaam > Singida	680	approx. 14	Bus	30,000
Arusha > Dar es Salaam	655	approx. 14	Bus	25,000
Singida city centre to Nka site	8	approx. 0.25	Car/Bajaj	2.000
	short distance		Dala-dala	4,000
	short distance		Piki-piki	1,000-2,000

Table 01: overview of travel conditions

Modes of transportation
 Bajaj: three-wheeled auto rickshaws
 Dala-dala: local taxi buses
 Piki-piki: motorbikes
 Bus: long-distance coaches

* All information is subject to change.

CHAPTER III.

REGIONAL CONTEXT



Singida Region

The Singida region, located in the centre of the country, is named after the regional capital and is one of the poorest regions of Tanzania. It is bordered by eight of the thirty-one other regions and has a total surface area of 49,438 km², about 5.6 percent of Tanzania's total area. 95.5 km² (0.19%) of the area are covered by bodies of water: Lakes Eyasi, Kitangiri, Singidani, Kindai, and Balengida. With an estimated population of 1,37 million (2012) people, it has a density of 28 persons/km². As it is located in the middle of the country, the region has a semi-arid climate.

Demography

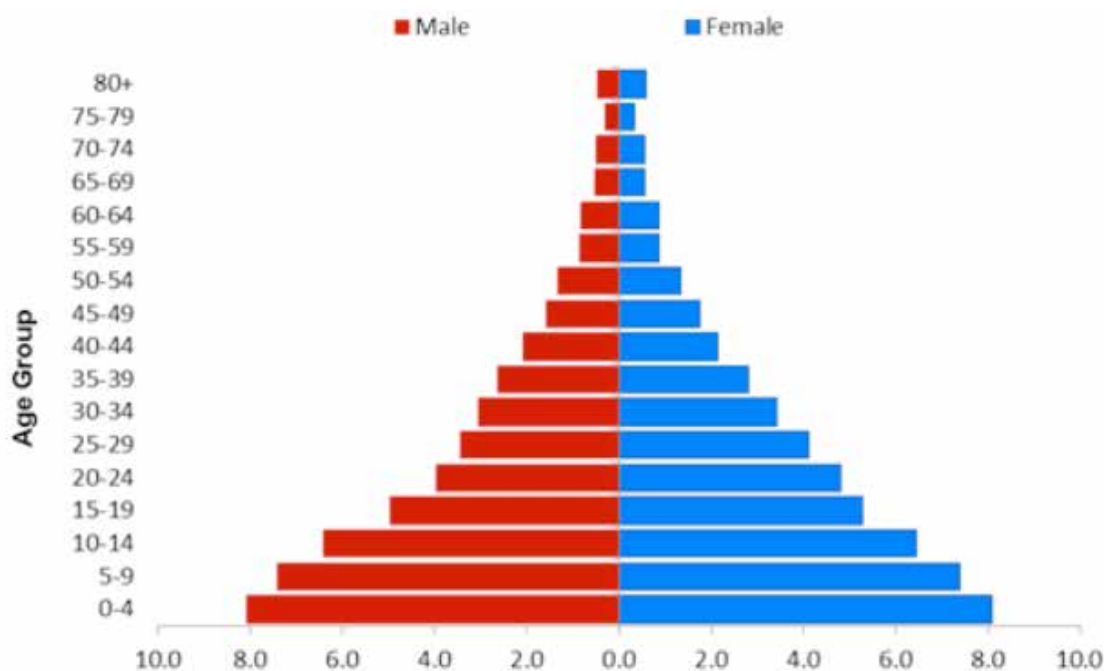


Image 02: Population pyramid of Tanzania 2012 census (NBS 2017)

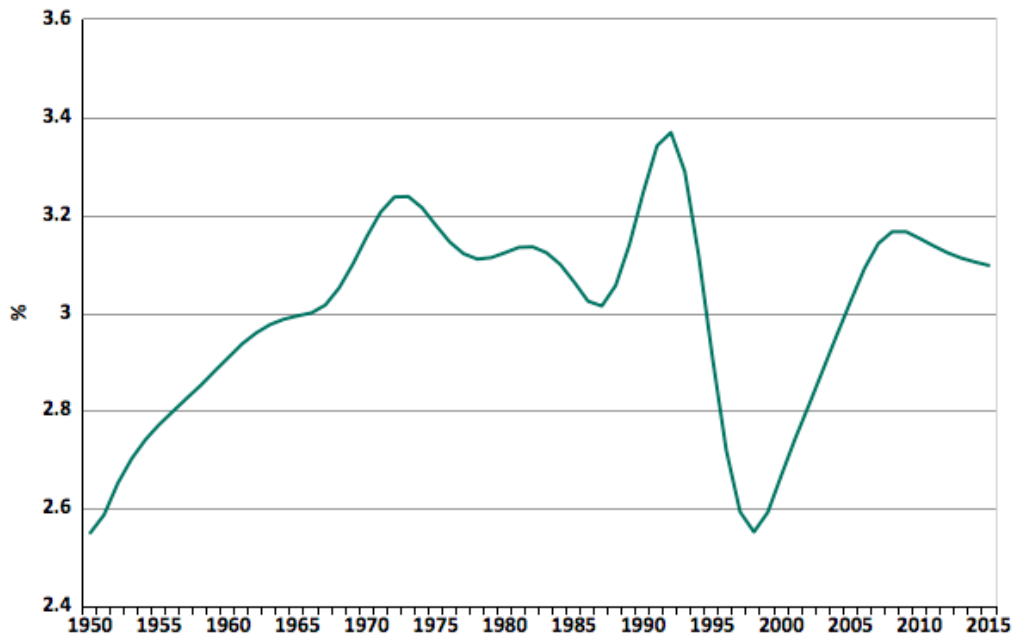


Image 03: Population growth rate (knoema 2017)

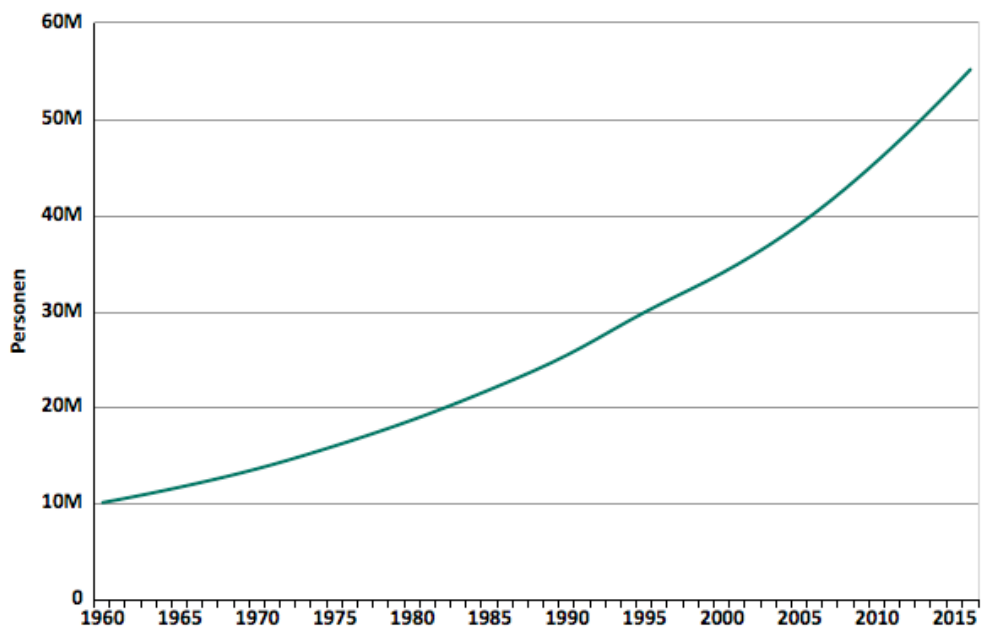


Image 04: Total population (knoema 2017)

Literacy Rate

After the founding of the country in 1964, Tanzania made general school education compulsory and free of charge. Many primary schools were built which then enabled children between the ages of 7 and 14 to receive a basic education. Due to this, Tanzania had one of the highest literacy rates in Africa in the 1980’s, with 85% of over 15 year olds being able to read and write. However, after an economic breakdown and the reestablishment of school fees in 1985, the rate went down to 70% in 1995. After 2002 public schools once again became free of charge and as of 2012, 80.8% of the total population had completed primary school. Nevertheless, nowadays, the literacy rate has reached a new low and although in 2015 98% of eligible children were enrolled in schools, the literacy rate only amounted to 69.4%. In 2010, 61.9% of women between the ages of 15 and 65 could not read and write; for women over 65, the rate reached 75.6%.

The literacy rates for Singida region, as found in a survey initiated by the government of Tanzania in 2006, are reported in Table 02 (Prime Minister’s Office 2006).

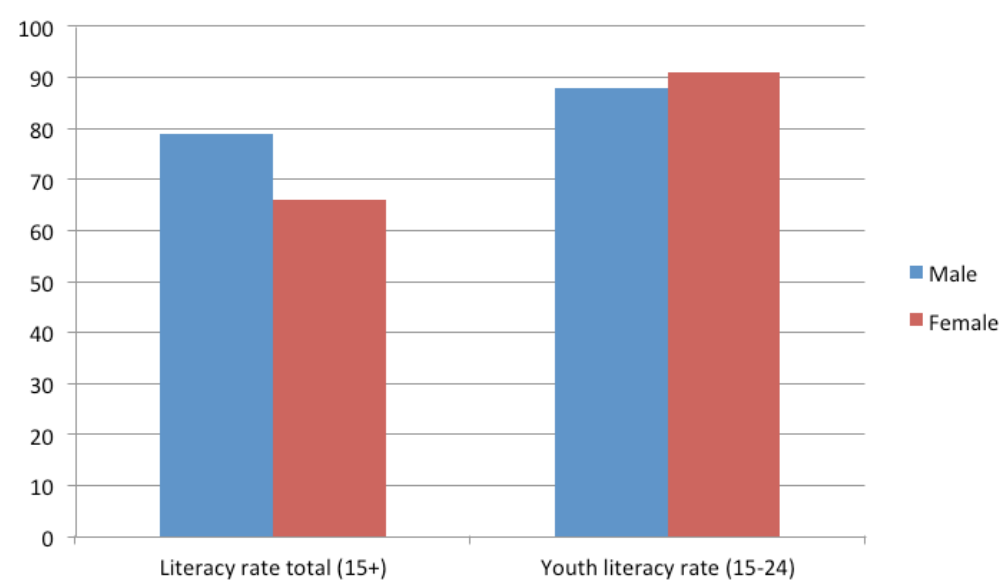


Table 02: Literacy rate by age group and gender in Singida region in 2006, percentages

Ethnic Groups

According to Nobel Peace Prize winner Wangari Maathai (2009), Tanzania consists of more than 120 micro nations. This ethnic map is based on the information of the Regional Museum (Makumbusho ya Mkoa) which is part of the Open University of Tanzania. The map contains only the major tribes and strongly simplifies the cultural diversity of Singida region.

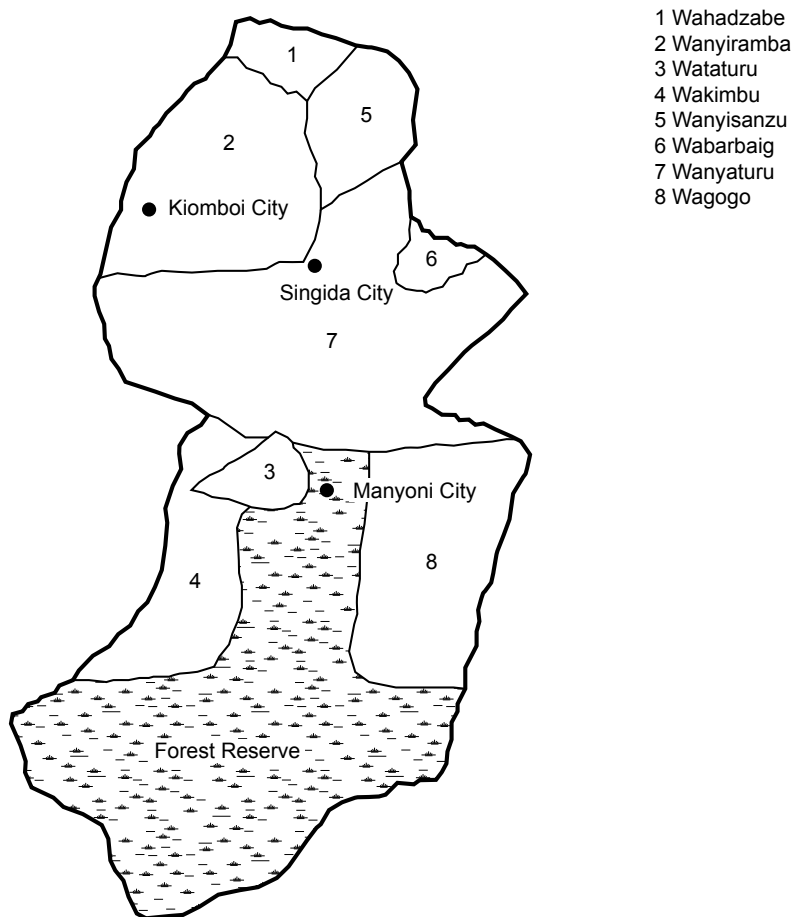


Image 05: Ethnic groups in Singida region

Climate

The temperatures in the region vary according to altitude but generally range from about 15 °C in July to 30 °C during the month of October. The region forms part of the semi-arid central zone of Tanzania, experiencing low rainfall and short rainy seasons which are often erratic, with a fairly widespread drought occurring in one out of every four years. Total rainfall ranges from 500 mm to 800 mm per annum, with high geographical, seasonal and annual variation. There are two rather well defined seasons: the short rainy season during the months of December to March or sometimes April, and the long dry season from April to November.

The following climate tables have been generated for Singida (interpolated data from metenorm) and provided with friendly permission by Transsolar Klimaengineering.

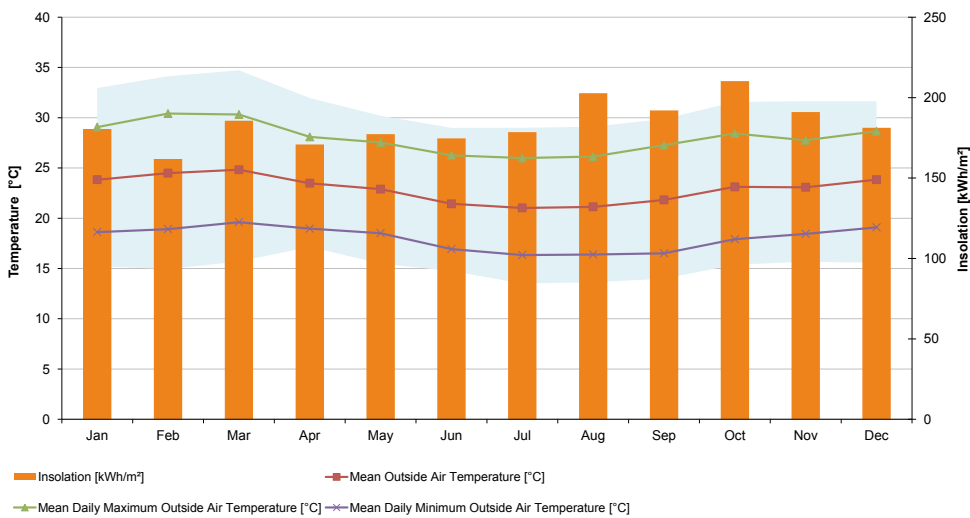


Table 03: Solar insolation and temperature

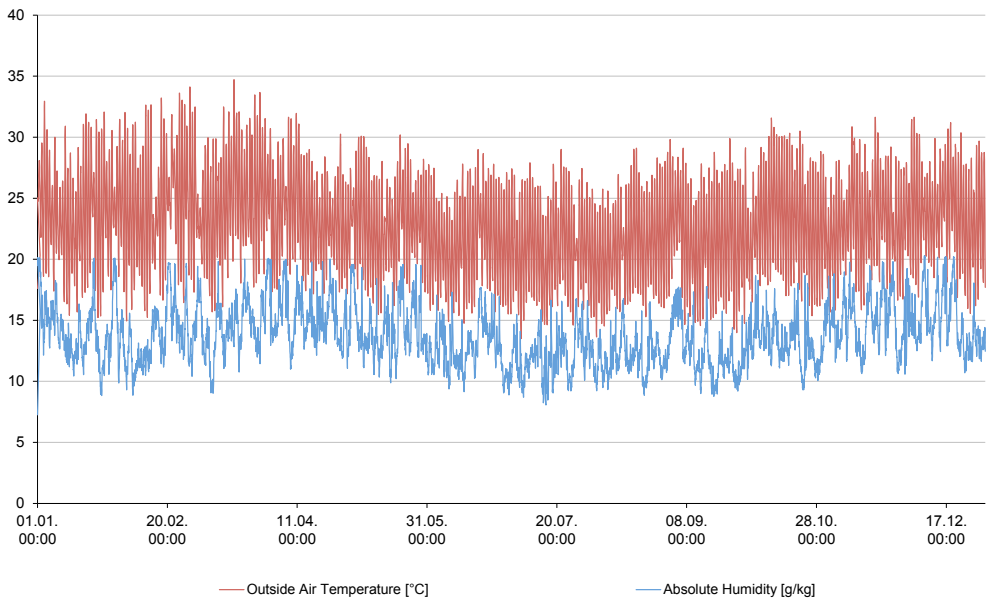
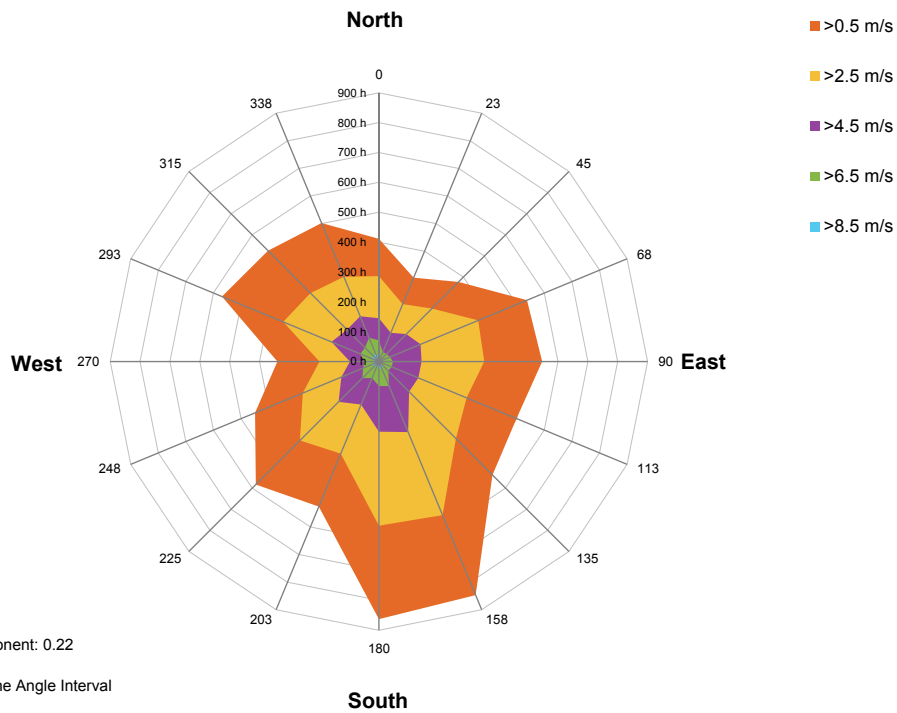


Table 04: Temperature and humidity



Available Wind Data: 8760 [h]
height: 10 m; wind velocity profile exponent: 0.22
Degree Value Marks The Middle Of The Angle Interval

Table 05: Wind rose

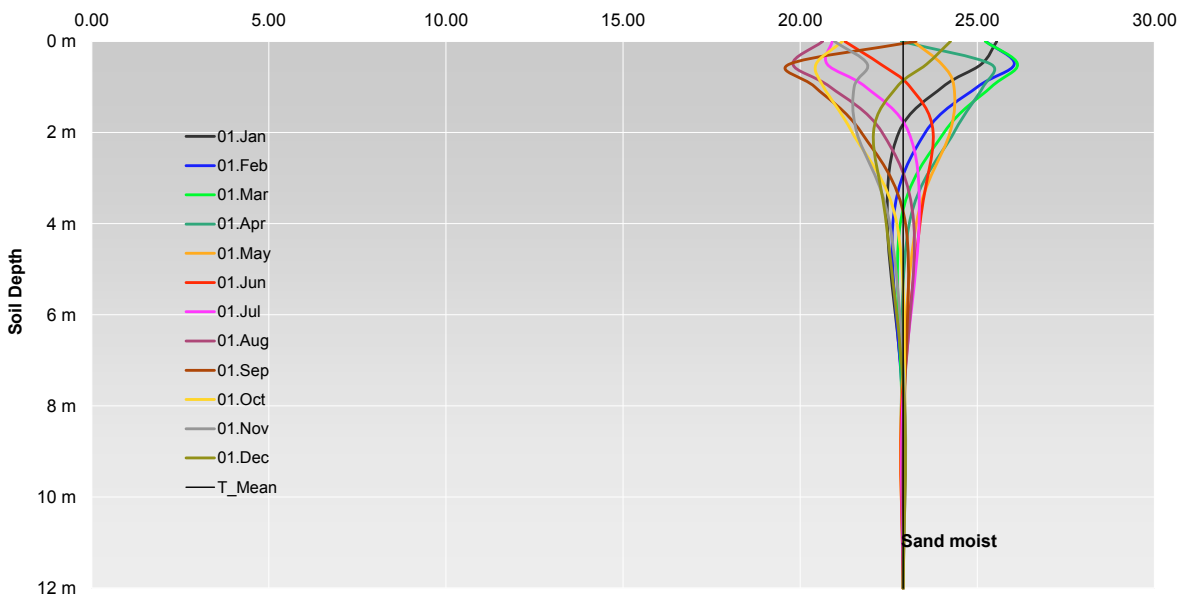


Table 06: Soil temperature

CHAPTER IV.

LOCAL CONTEXT



Singida City

The regional capital of Singida is a city in central Tanzania and has an estimated population of 120,000 people (2012). It is located on a raised plateau at the south-western end of the Mbulu Highlands, between two lakes, Singida and Kandai. Singida City is an important traffic interchange between Lake Victoria and Dodoma, as well as between the west (Rwanda) and the east (Dar es Salaam). The city is a legislative centre with schools, a hospital, a railway station, a football stadium, and a market, which forms the city centre. The town lies far away from tourists and is home to many craftsmen and traders.



Image 06: The city of Singida is flanked by two lakes

Our Mental Map

A mental map is a person's personal perception of a specific area. It illustrates which places, which streets or which buildings had been kept in mind and helped to navigate and to orientate within the given context. It is basically a map created from memory of an urban area.

The following map was drawn by the team of Raumgeschichten after its few days stay in Singida. It shows a subjective view of the city and has no intention to give a full and comprehensive picture of the town.



Lake Singida

Agriculture / Nature

Water Protection Area

Open University

Hospital

Library

Market Area

ATM

Construction Site

Road Upgrading
Financed by Worldbank

R

Municipality

ATM

Decayed Stadium

Boulder Site
Landmark

Lake Kindai

City of Contrasts

The way streets are designed or, rather, not formally designed, is one of the most striking contrasts within the urban landscape. As urban planners we can read the unpaved streets as kind of floating landscape or we can interpret them as a very modern shared space (shared space, in this context refers to a space shared among both pedestrians and motorized vehicles alike).

These are also multifunctional places. On the one hand, they serve as a place for circulation. On the other hand, they are places of social interaction, for gathering or for places of commercial activities. These very 'raw' places with their hidden logic and, for foreigners, often incomprehensible borders have a kind of attractiveness which is hard to describe and even harder to capture on film.

However, it is undeniable that outside of these 'urban planner romantics' it is almost certain that most citizens prefer a formally designed street. The unpaved surfaces create a lot of dust and sometimes make access and circulation very difficult. Particularly during the rainy season, with its storm water events, drainage and erosion become a critical issue in these areas.

While transforming or developing these spaces, it is important not to overlook the strength and potential of these 'raw places' and not to neglect all the social functions that are currently embedded there. Imposing a 'classical' street design, not adapted to the local context, would threaten their existence and would only produce a functional space for transportation.



Image 08: Large parts of the city are characterized by informal street layouts with unpaved surfaces. Some recently developed city patterns feature formally defined street layouts.



Image 09: A large percentage of the urban fabric is composed by one-storey, low cost mud houses. These are contrasted by multi-storey buildings with extravagant designs.



Image 10: Those who can afford it, tend to build with locally produced concrete adobe bricks.

Range of Urban Development

Singida faces a huge backlog of solving public infrastructure issues. Many households for example seem to not have access to the central water supply. The water quality of the two lakes appears to suffer due to the inflow of untreated wastewater. (Note: regarding water quality, no detailed information can be provided. Further studies are necessary.)

In general, insufficient public infrastructure causes a havoc on economy and public health. In Singida, the potential use of the two lake shores as recreational spaces and tourist attractions should be a driving factor for tackling these issues.








Water from one of the lakes carried mostly by women or children

Water transport via buckets which is distributed from cisterns or fountains

Water transport via truck which is stored in individual water tanks

Running water from the water tap

Image 11: Range of water supply

Urban Potential

A birds eye perspective of Singida reveals several very interesting findings.

Most striking is the small amount of multi-storey buildings. Nearly all buildings in Singida are single-storey constructions with the exceptions being some mainly commercial buildings. Due to this fact the skyline, the silhouette of the city is not characterized by its buildings but rather is dominated by its extensive amount of large trees and considerable boulder sites.

Trees can be found along the roads as well as in private courtyards and gardens. They provide valuable shade and mitigate the so-called ‘heat island effect’ of the city. Furthermore, some of these trees are crop plants such as banana palm trees, which can be seen as a way of urban agriculture.

Located between two lakes, Singida can be described as a very homogeneous urban fabric interwoven with green spaces and agriculture bringing a **Green City** into shape. However, if we consider the way modern buildings in Singida are being built, there seems to be no awareness of this uniqueness and immense potential as a Green City. Role models of urban development are economically potent cities with ‘international architecture’; and their state of the art design threatening the peculiarities of the existing urban landscape.

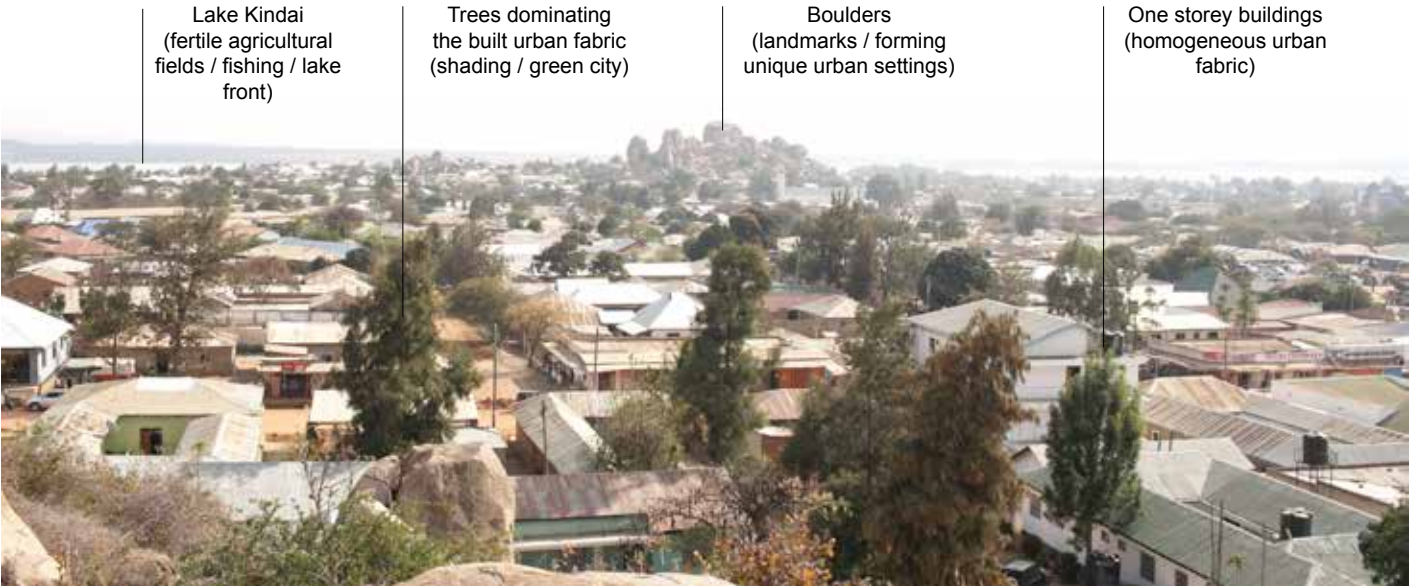


Image 12: Birds eye view of Singida



Image 13: Coastline of Dar es Salaam as a comparison

Characterizing Elements



Image 14: Boulders as landmarks within the urban fabric



Image 15: Boulders closely integrated in urban fabric



Indication of no
thoroughfare

Indication of
plot boundary

Image 16: Subtile elements indicate boundaries and borders



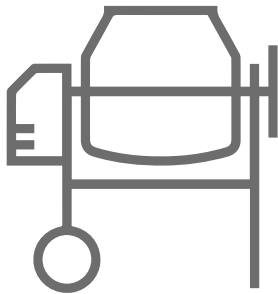
Barricaded openings
indicate long-term building sites

Image 17: Unfinished construction sites as extensions or redevelopments are spread throughout the city

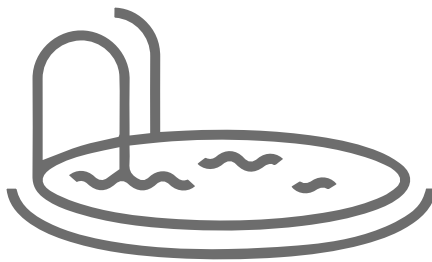


Image 18: Façades of residential houses are used for advertisement

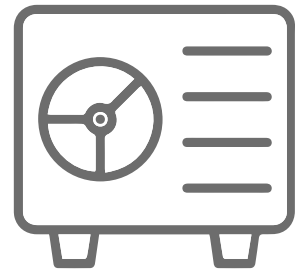
Let's face reality



People in Tanzania (as in most places all of the world) prefer concrete rather than mud as building material.



They would like to have a swimming pool as you might wish to have one in your backyard.



They would not deny the comfort of an AC, if they could afford it.

Streetscape

Hui Guo (KIT) contributed to this paragraph.

Preface

The streets of Singida are an invitation to travel by foot or to take a stroll. Streets, buildings, and human beings seem to be in great harmony with one another. Singida – a city which could preserve its human scale. In Singida, streets are multifunctional and multimodal spaces. Space for circulation is overlaid by layers of social gathering, economic activities, and urban greenery. Storm water drainage adds an additional functional layer to the streets. Cars, bicycle, and pedestrians use this street space alike. Walking along the streets of Singida appeals to all of one's senses. People seem to have a strong sense of place and a strong feeling of belonging. The city isn't in a constant rush or overloaded with advertisements and neon signs. The city still follows the natural rhythm of day and night. Singida – a unique and sensitive urban environment. To give you an idea of the streets in Singida, we could provide you with a set of classical technical drawings. However, this would be a very one-dimensional and functional view, totally inappropriate for the many-sided 'adept' streets of Singida. Therefore, we would like to invite you to join Mabubua, a fictive person, as she shares her personal view of everyday life through the various street spaces in Singida.



Hello, my name is Mabubua. I'm an eighteen year old girl, living in Mungaa. Today I will take you with me on my journey to Singida, the capital of my region in central Tanzania with its amazing street life.

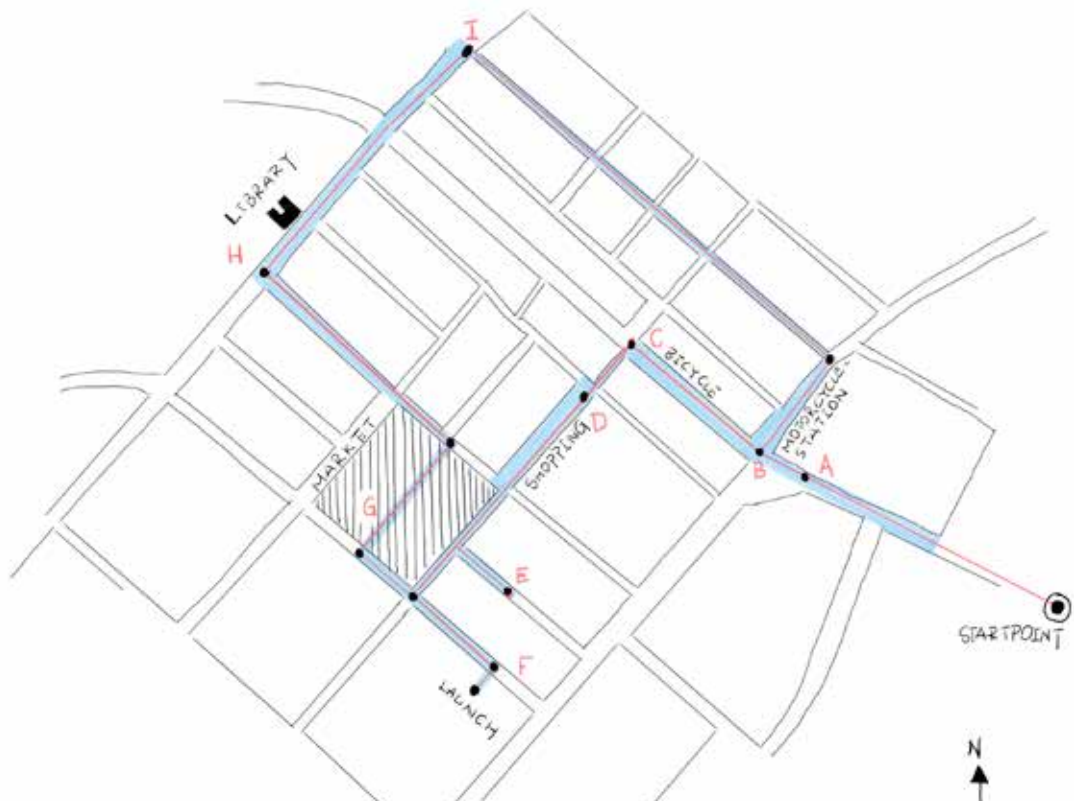


Image 19: The map shows Mabubuas walk in the city

Location A

At 7 in the morning, I take the minibus. Lucky for me, Mungaa, my hometown, is located on major thoroughfare B143, which connects Singida with Arusha, so the ride on the asphalt-street takes me only 30 minutes. At the bus stop next to the big city junction I step out of the bus, onto the paved sidewalk under which the canal, storm water drainage, flows. Next to me, there are a lot of parking lots in front of the shops, so unfortunately I can't see if the empty shop now has a new owner. I cross the street at the zebra crossing and go to the motorcycle station.



Image 20: Major thoroughfare with covered canals and pedestrian sidewalks

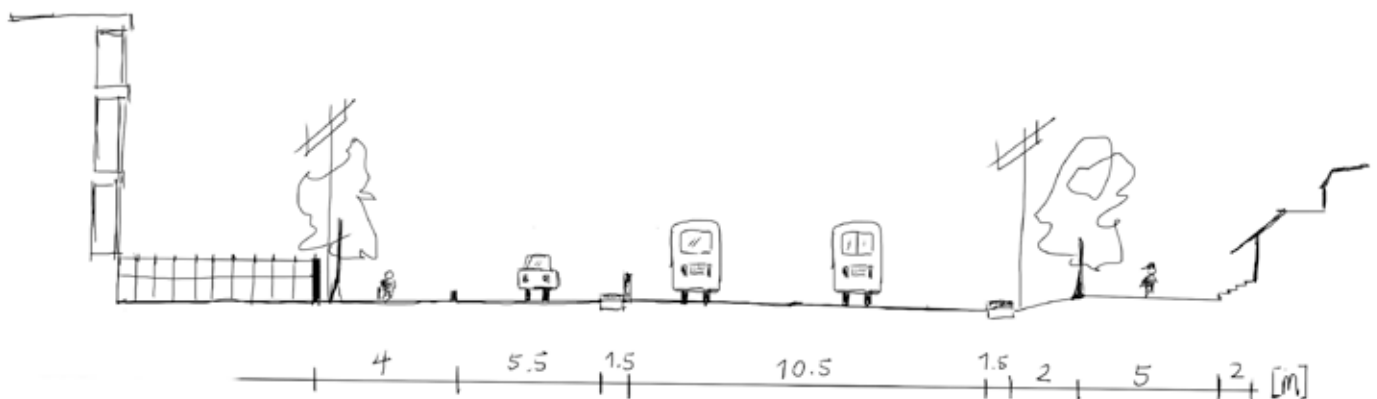


Image 21: Street section

Location B

While waiting for new customers, the drivers are relaxing in the sun on their motorbikes and only Joseph is interested in giving me a ride to the shopping area, since it is in short distance.



Image 22: Unpaved main road

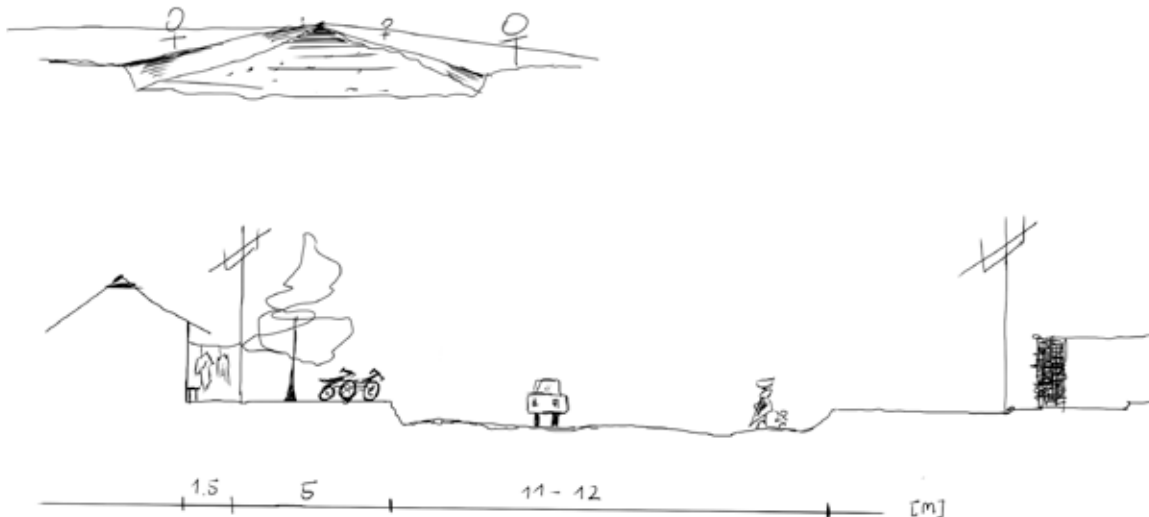


Image 23: Street section

Location C

After some amusing speed bumps, he drops me off in front of a bicycle shop, which is displaying their bicycles on the paved sidewalk.



Image 24: Shops along B143

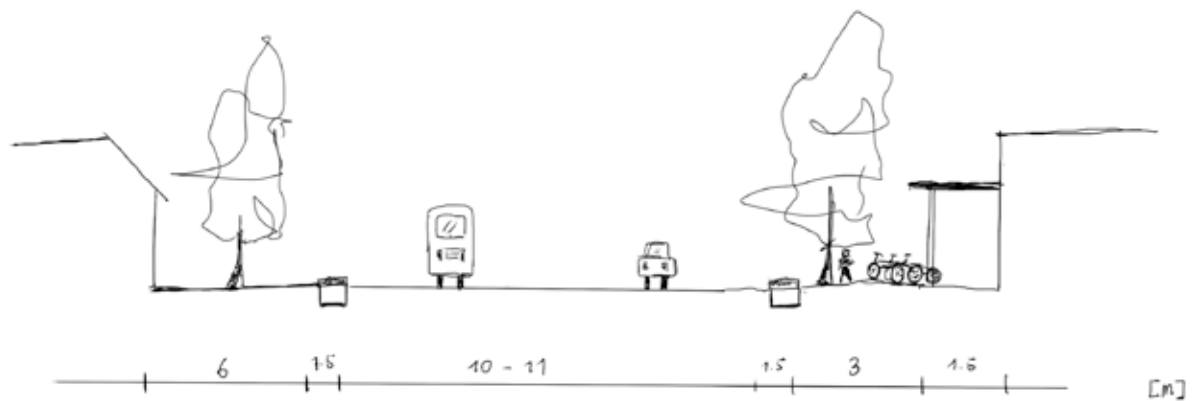


Image 25: Street section

Location D

After I bought one of them, I cycle into the heart of the busy city centre, where everyone shares the street: cars, trucks, bajajs, bicycles, and pedestrians. On one side of the street, the trees along the street provide a lot of shade for traders, small shops, and people who are waiting or just relaxing on the sandy sidewalk. On the other side, there are no trees and the restaurants and shops extend their space over the sidewalk. I park my new bike in the open canal between parked cars on the street and the busy sidewalk with its shops.



Image 26: Pictures of the city centre

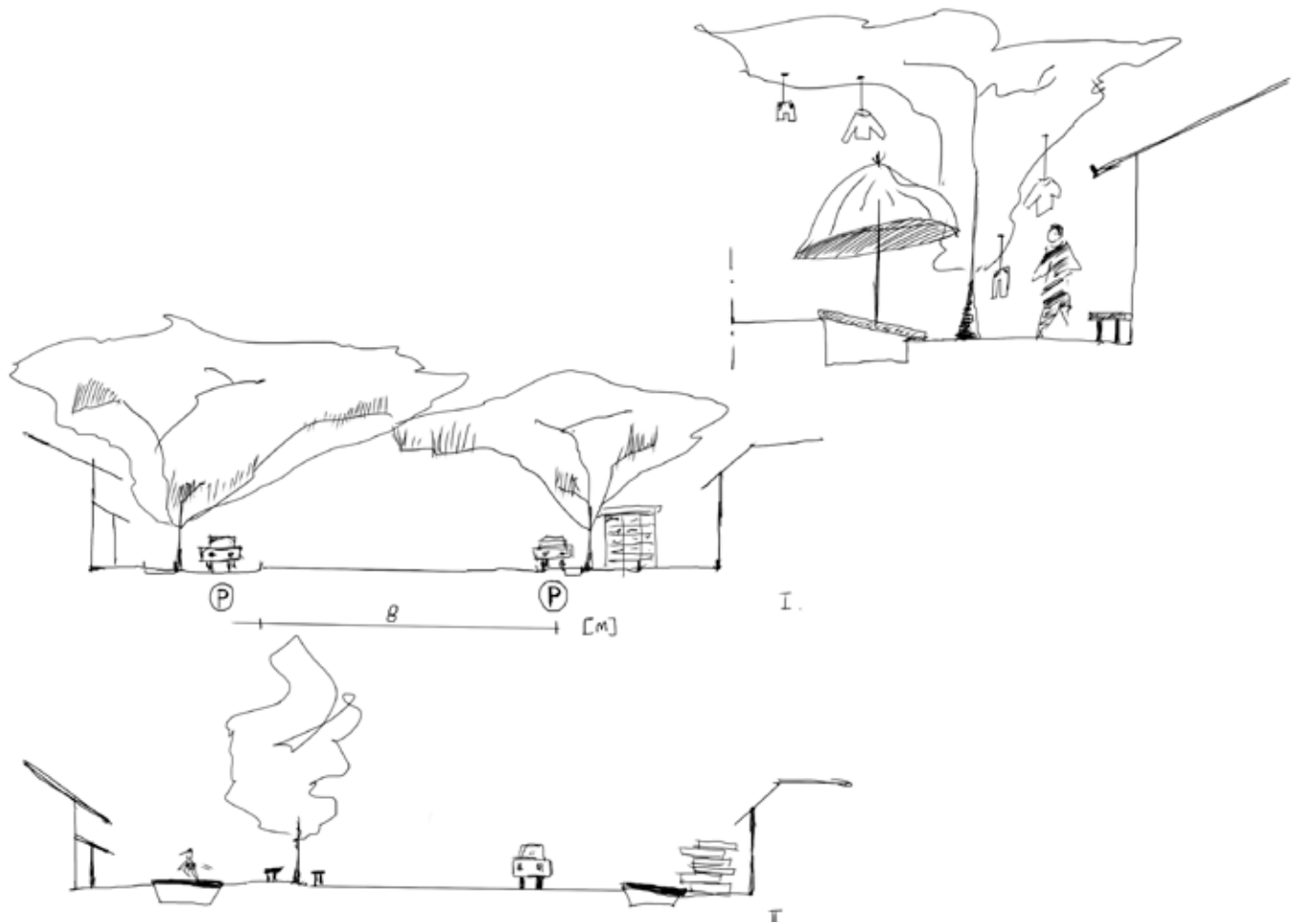


Image 27: Street section

Location E

After buying various things, I take a shortcut through a small sandy alley, to reach a nice restaurant for lunch break.



Image 28: Small sandy alley

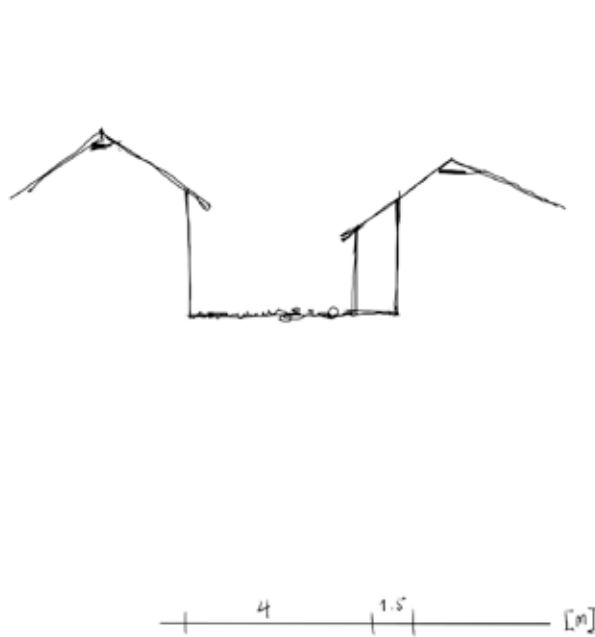


Image 29: Street section and perspective



Location F

Due to the stones in the small alley, I unfortunately get a flat tire, so first I bring my bicycle to the workshop across the street from the restaurant. They are working next to the street, so while I have lunch on the terrace in front of the restaurant, I can see how fast they repair my bike. Around the corner in a silent and tiny alley, I finish my break by having a chai on a bench in front of a small shop.



Image 30: Pictures of secondary road

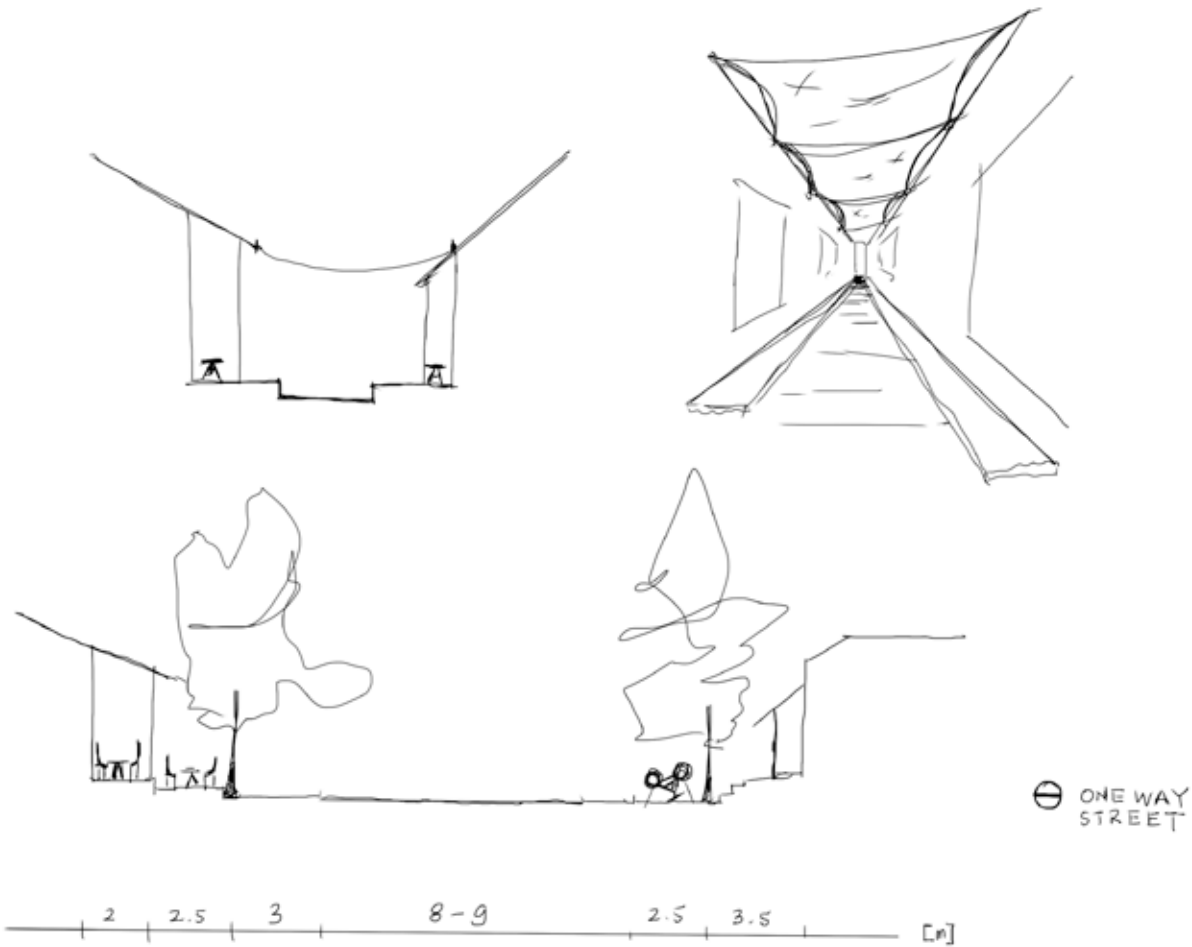


Image 31: Street sections and perspective

Location G

After my break I continue my shopping while strolling through the narrow market alleys. Between the roofs, the traders have hung plastic sheets to keep out the sunlight. At the large market hall I buy vegetables for dinner and especially go to my favorite fruit shop for bananas. It is located on one of the backstreets of the market, where the traders and workers normally get their food from one of the various small restaurants.



Image 32: Pictures of central market area

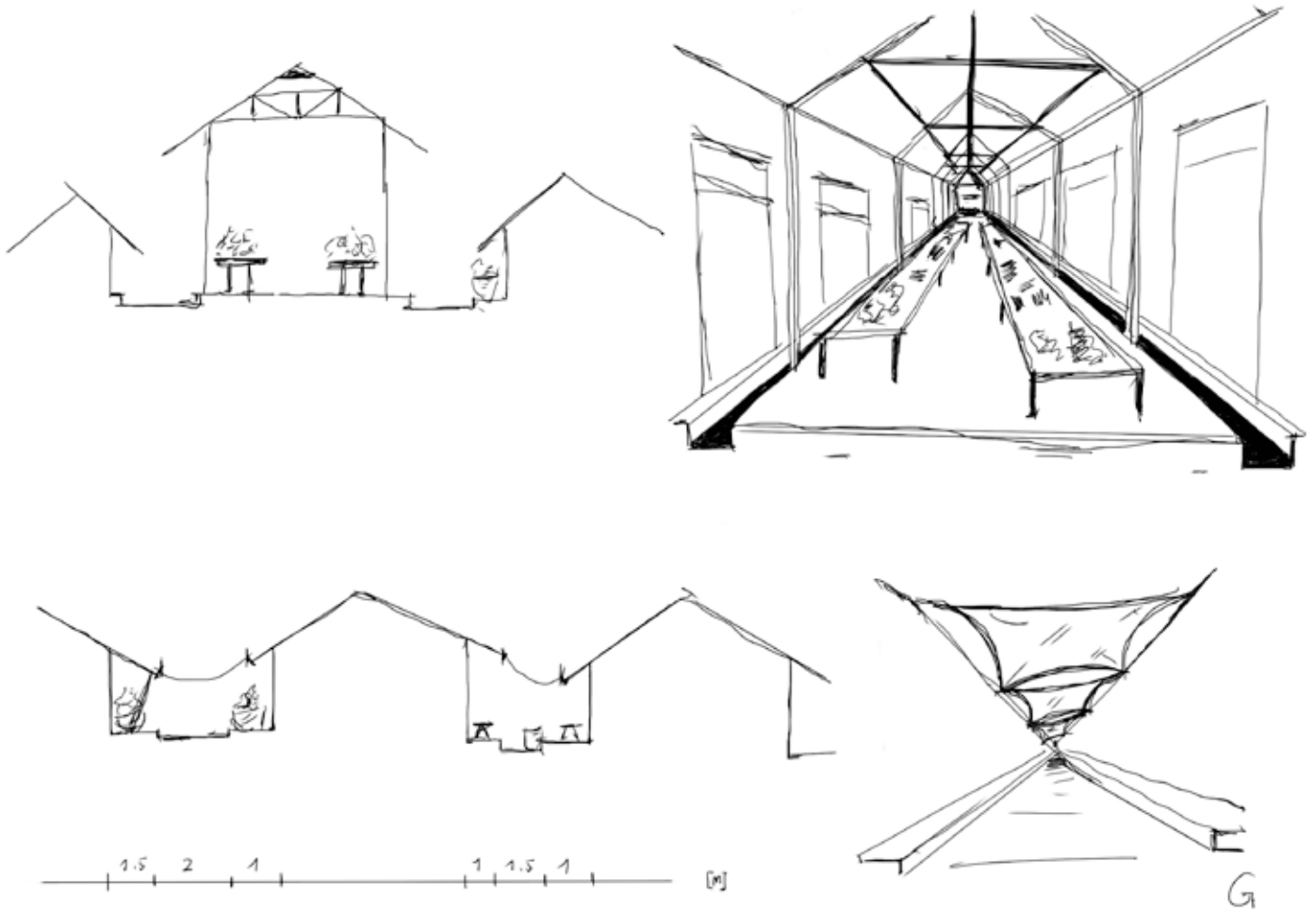


Image 33: Drawings of market alleys

Location H

Loaded with all my new stuff, I walk to the place where the bajajs are waiting. I have to walk on the street because there is no sidewalk and the canal next to the street is so wide that you normally have to enter the shops by crossing over a bridge. While driving through the street with all other vehicles and pedestrians, a friend of mine stops with his bajaj and gives me a free ride back to the bus station using a shortcut through a residential area.



Image 34: Pictures of residential area

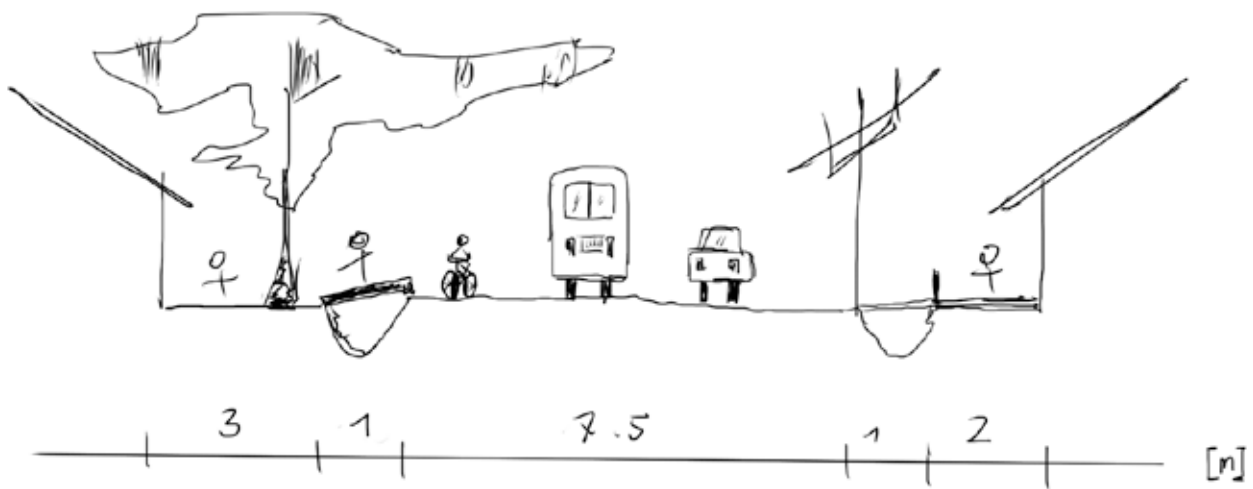


Image 35: Street section

Location I

There is only sand and the whole street is shared by everyone, which creates a really relaxed atmosphere. We reach the bus station in time so I can directly get onto the bus and say goobye to the fantastic city of Singida, knowing that I will come back very soon.



Image 36: Pictures of the multi-functional space within the residential area

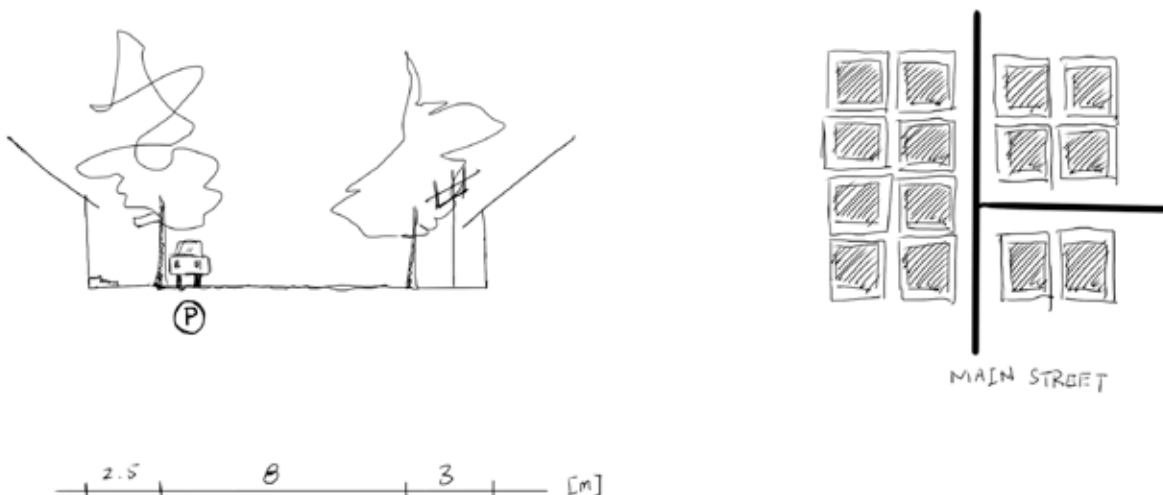


Image 37: Street section and schematic layout

Conclusion

The proportion of streets to buildings is very small. Most buildings are one-storey buildings. Very rarely will you find multi-storey buildings. Canals and trees are used as a location for selling; sometimes even bridges over canals are used in this way. The area in front of a shop is used by the merchants as a selling area, with cars usually parked on the side of the street. An open canal surrounds the blocks separating streets from shops; a covered canal is used as a pathway. Cars, bicycles, pedestrians, and bajaj's all use the streets at the same time. There are no traffic lights and the streets have no visible names.

Public Spaces

Vannia Contreras (KIT) contributed to this paragraph.

Since urban public spaces are recognized as the main arena where humans and commerce are in constant interaction, several ways of urban life are able to develop there, due to a large diversity of driving forces.

The general objective of this chapter is to show an analysis and understanding of urban public spaces in Singida, Tanzania. How does the community create public space to satisfy their own requirements and relationships? How does the economic activity of the people influence the dynamic of the public space? To answer these questions, it is important to understand that urban structures in Tanzania are constructed from a large amount of differing small factors, which are not usually predetermined by a governing system or some prior contemplated urban plan. Mostly they are influenced by many small economic and social activities, based on their own collective cultures. This allows for a large amount of communal activities where people and spaces are identified according to their own activities, rhythms, and forms.

Taking a walk around Singida, observing urban public spaces and buildings isn't an easy task since as there are myriad ways of categorizing them. It is probably easier to understand how private life inside of houses work and how these interior activities then influence the rest of their surroundings in the neighborhood. This can then be extrapolated to articulate how urban public spaces affect the rest of the city.

For example, a central meeting place in the house, where some central activity, such as cooking, takes place, transforms the interior patio, immediately, into the most important room of the house. This is the place where the family eats, gathers, washes clothes or dishes, and it is usually the first place where guests arrive. Similarly, these patio spaces, as well as other rooms in the house, extend out into external public spaces, where activities are carried out in the intermediate space between the house and the community.

The rhythm of the activity of these places can fluctuate according to time of day, temperature, time of year, and even the religion of the people using the space (e.g. muslims tend to need more privacy due to religious regulations). This makes it hard to identify common patterns of social response or to even categorize the social spaces in different neighborhoods. The next scheme corresponds to a neighborhood located on the south side of the city, not far from the city centre, schools, and markets, and basically shows the dynamic of the house in close relation to the neighborhood.

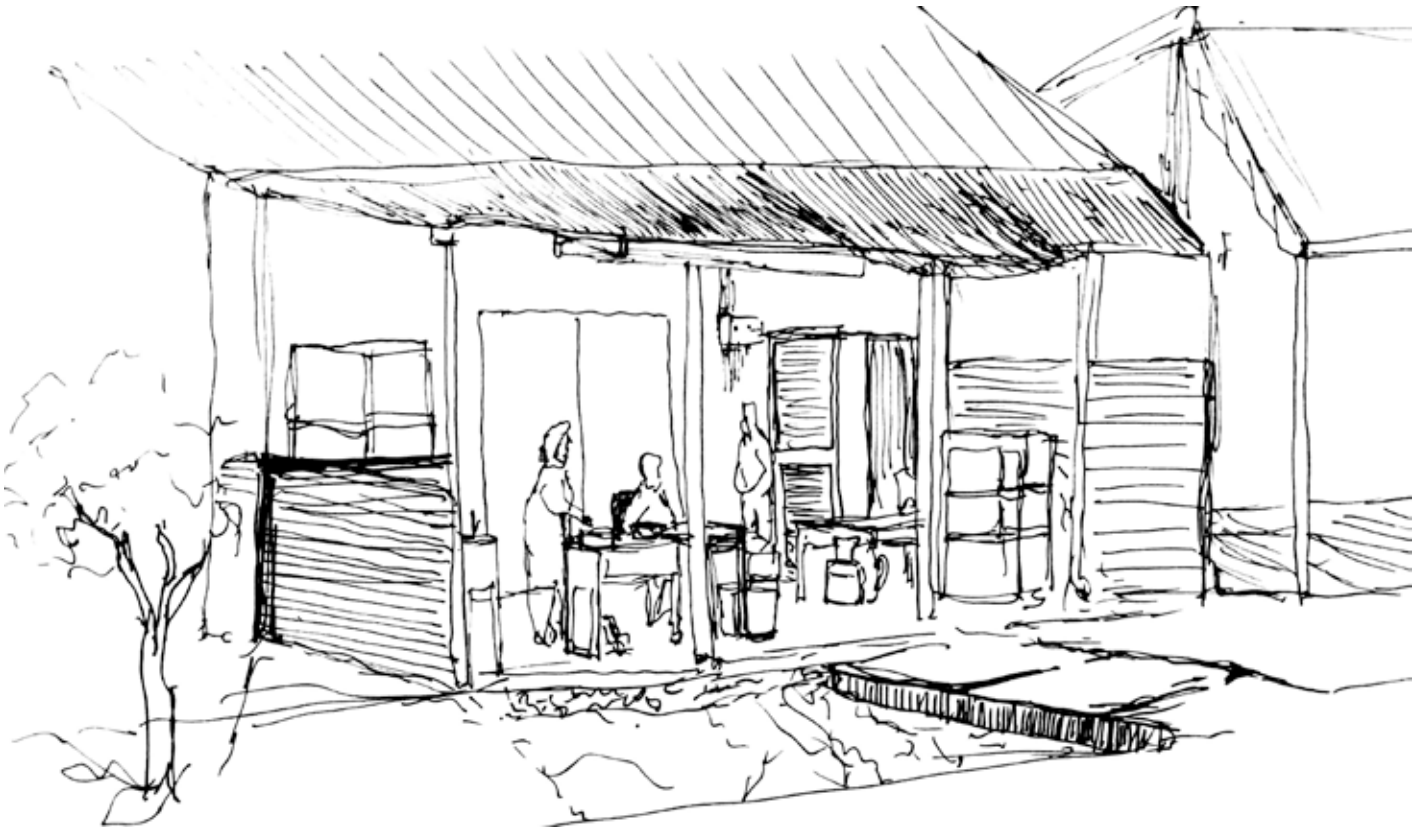


Image 38: Some people cook in the outside area of the home, making, in many cases, the activity of cooking and eating a common outdoor activity, contributing to a lively atmosphere.



Image 39: Typical layout of house and residential area

Just as some forecourts identify as spaces where children meet outside to play during the time of day when the outdoor temperature and the angle of the sun allows for a comfortable setting, geographic elements such as large boulders will be identified in some neighborhoods as central meeting points. These places are considered as a safe space for their intended purposes as they are visible from most vantage points, and/or can be reached in a short walking distance.



Image 40: Examples of some central places in the city



Image 41: Drawing of a central meeting point

The collective life of the neighborhoods comes in many forms: open spaces, markets, parks, or even streets. Open spaces, where recreational activities such as football are often played, act as arches connecting two or more neighborhoods, while at the same time marking the borders to these areas. In the case of paved streets, these routes made for massive transport usually act as a border between communities, separating them from one another.

City Centre as Trade Center

Another example of how the public interacts with the city can be seen by the markets in the city centre. The markets are defined by the streets and the open squares around them. The streets determine the primary route for transport, trade activities, and people. The spaces created by the open squares, connect the main streets, and are open to all, making them reference points for the city.

The dynamic of the market streets seems to be guided by some unspoken agreement between the people, the vehicles, and the shops which allow for transactions to occur in a safe manner, without accidents or anxiety. Through the social interactions of its inhabitants, participants unfamiliar to this community are quickly able to acclimate and participate in the space. In this way, the market is one of the most **inclusive places** in the city, where the principal factors of cultural identity can be easily recognized.

Other kinds of public spaces are articulated in the market area, but the way in which they work is determined by time, e.g. according to the season and the time of day.



Image 42: Drawing of a typical street scene

Public Space - Open Space?

It is essential to distinguish our modern understanding of the concept and the context of ‘public’ space. In developed countries, this is usually determined by a number of policies and organized structures which correspond to a system of economic and social criteria based on its society. On the other hand, an ‘open’ space is generally understood as simply a space accessible to all.

In the case of this study in Singida, the understanding of ‘private’ space, ‘open’ space, and ‘public’ space can easily be confused, as here, ‘public’ space or even ‘private’ space (here, meaning privately owned) is often being used as ‘open’ space.

Multiple meanings of the term ‘open space’:

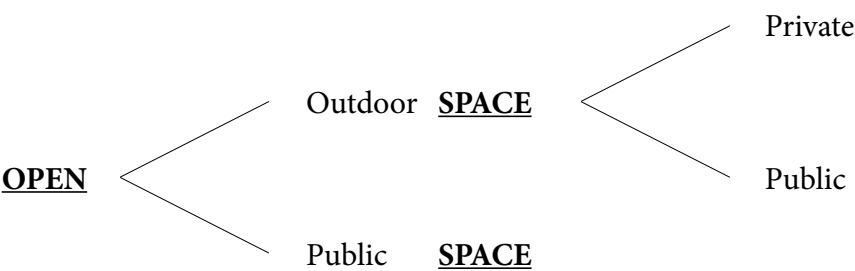


Image 43: It is especially difficult to recognize the boundaries between the houses in the neighborhoods of Singida, as they are often used as public space

Understanding the Local Scale

The objective of this chapter was to generate a discussion and understanding of public spaces in Singida. By comparing some general concepts borrowed from developed countries about scale and public space, we attempted to understand how they could work in Tanzania through the analysis of use, perception, and function.

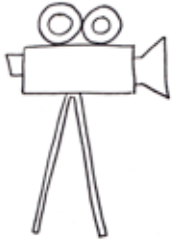
The influence of the community can be identified in every public space, making it the main driving force between the neighborhoods and the city centre as trade centre, and which acts as a bridge to rural life.

Since the most observed factors affecting the use of public space in Singida were the outside air temperature and the relation to the angle of the sun, the activities of the community and people’s entire behavior were determined by weather conditions. It is important for any design solution to consider how normal activities can continue to occur regardless of the outside conditions, in particular during rainy seasons.

Of crucial importance in the relationship between humans and economic activities in the city is the understanding that communication between the people, businesses, and the authorities are the key to the orderly functioning of the city. Any future proposal for public spaces needs to consider this to be able to protect the **cultural and social values of the city**.

Sceneries

Sophie Pfeil (KIT) contributed to this paragraph.



Let's imagine that a filmmaker would like to shoot a few scenes of a movie taking place in Singida, or that the director of a theater would like to produce a play taking place there. Which locations would they choose to represent? How could they recreate these places? What artefacts would they need to reproduce the atmospheres of the city? The five sceneries described in the following pages have been identified as particularly interesting or representative of Singida.



Scenery I: Market Alley

The alley is very narrow, with market stands right next to each other. The sides of the alley are not clearly defined. Ropes and plastic containers are hanging from corrugated iron roofs. Plastic sheets are used as a protection from the sun. Here also, there are many wooden pillars with seemingly unstructured cables connecting each other, and a colorful flag.

A pile of plastic armchairs with the Coca-Cola label are standing in the middle of the crossing of two alleys. In this lane, most of the stands sell heaps of small fishes, red onions, garlic and potatoes, piled high on wooden containers. There are also cartons and bags stored everywhere, wherever there is still room. Many people are walking by and talking, but it does not feel too crowded or too loud. There are many flies, attracted by the strong smell of fish, and a chicken is walking around randomly.



Image 44: The market alleys are narrow and busy. There is a large variety of food, fabrics and other tensils to be bought.



Image 45: Traders in the market alleys sell everything from vegetables to fish to fabrics.



Scenery II: Backyard

The main access to the backyard is through the main house (i.e. the house which has its façade towards the street). There is no window to the backyard. There are two low sheds, oriented perpendicular to each other. The fourth side of the backyard is created by another house, which is still being built.

A big part of the yard contains concrete bricks, which will be used to build the house on the fourth side of the backyard. Many pots and jars made out of metal or plastic, and yellow jerricans lay around. Some are empty, some others contain water. There is also one small tree, and clothes are drying, hanging on two cables. The area is also used for cooking. Some children are running around, naked or dressed. A woman is cleaning a pot. A wild cat is walking on the roof.

Many backyards are very small, since most areas are covered by corrugated iron sheets. On the corrugated roofs, you see random things such as wooden sticks, tires, stones, umbrellas, plastic bottles, shoes, for example.



Image 46: Typical backyard of a family home

Scenery III: Cathedral

The cathedral is situated at the end of one of the main roads of Singida, which creates a perspective scene wherever one is in this street. In the background, one can see trees and big boulders that define the cityscape of Singida. The cathedral is made out of white and red stones, with a white tower raising high above the neighborhood.

It stands in the middle of a big courtyard, surrounded by long and narrow one-storey houses and iron gates. The floor is paved with stones, which are rarely found in the city, and there are a few trees in the courtyard.

There is an outside atrium with three arches on the front façade, one step up, leading inside the cathedral. People wearing colorful clothes with African motives sit on benches or stand under or next to the atrium, it is a peaceful and relaxed atmosphere. Inside the church, red crosses are painted on the walls and the position of the windows brings a lot of indirect light.



Image 47: The cathedral is a place of worship but also a meeting place for the rest of the community.



Image 48: The main road, currently under construction, leading towards the cathedral.



Image 49: The cathedral from the inside.



Scenery IV: Shops in the Streets

Lining the streets are shops with advertisements painted on the walls (local or international). They have wooden doors painted as well with signs. One shop sells clothes, another is a hair dresser, the one after sells cellphones and electronic devices. Behind the shops there is a wooden pillar with a system of cables and two or three trees.

The buildings have corrugated iron roofs which create a covered outdoor space, opening and extending the shops to the public realm. Under this roof, you can find one or two benches made out of wood, where men sit, rest, talk and watch over the street. Often people also sit on plastic chairs advertising Coca-Cola or on the roots of a tree.

In the foreground, there is a dirt road with a few bajajs and bikes driving by. The houses and the dirt road are separated by a roadside ditch that can be crossed using small concrete or wooden bridges. The shops are built on concrete floors which make them one step higher than the dirt road. You can hear the bajaj honking, the wind in the trees, and the conversations of people. Depending on the size of the street and on the time of day, it can either be an extremely busy or a very calm atmosphere.

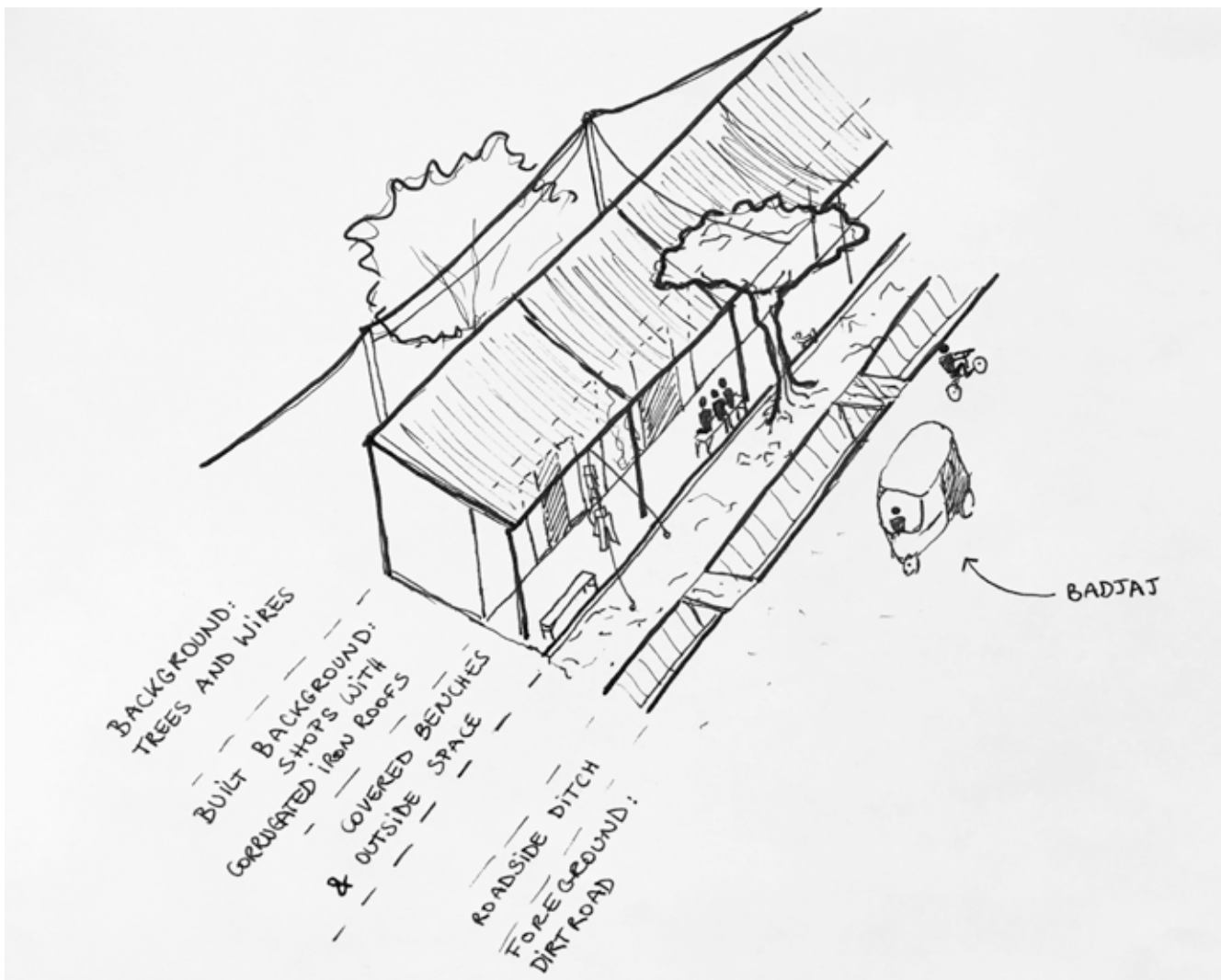


Image 50: The area in front of shops is a very important place for social interaction, making the streets very lively.



Scenery V: Busy Road Intersection

At this road crossing, we can find one of the few multi-storey buildings of the city. Many bajajs, cars with a third rear mirror, trucks, bicycles, and motorbikes drive by, stopping to let people out or to park for a few minutes to buy something. The men on the motorbikes wear helmets, but the women sitting on the motorbikes with them do not.

One of the roads is bigger and made out of concrete, but the other one is a dirt road under construction. The concrete road is situated higher than the dirt road. There are kiosks and shanties selling fruits, shoes, cellphones, watches, clothes, etc., mainly situated on the dirt road. There are a few trees and many wooden pillars with cables. It is a very busy and dusty place.

The atmosphere might change substantially once the construction work is finished and traffic is flowing more heavily.

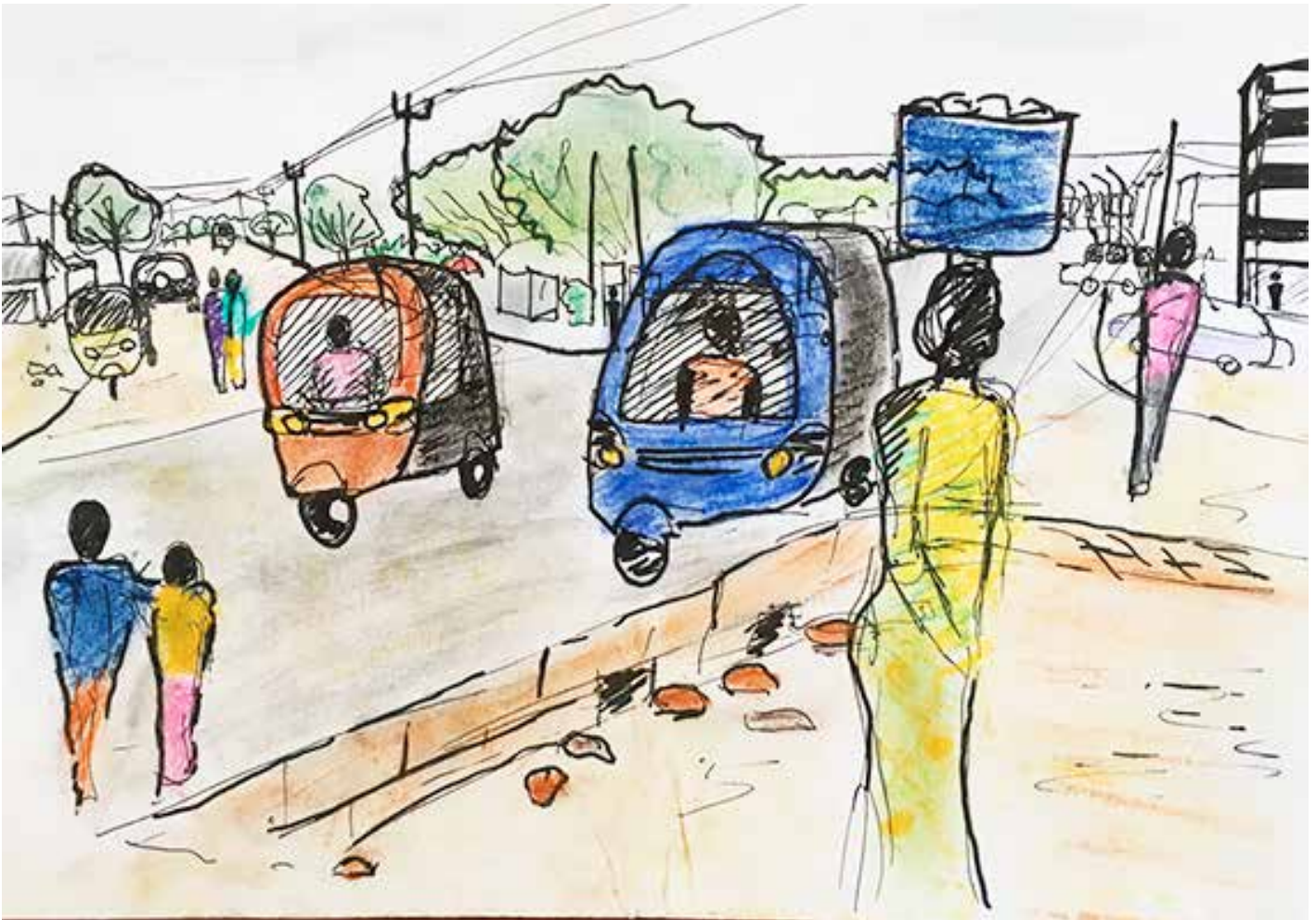


Image 51: The road-crossing is very dusty and busy, not only because of the traffic but also because of the street vendors.



Image 52: Big and busy road intersection with a lot of bajajs, cars, bicycles, and pedestrians.

Conclusion

These five scenerios correspond to common situations that we have come across many times during our field trip or to special locations that struck us as particularly interesting and emblematic of everyday life. Through them, one can hopefully get a deeper understanding of the atmosphere and day-to-day life in the city.

Globalization

Singida is located in the rural part of Tanzania, about 14 hours by bus away from Dar es Salaam, with nearly no mention in guide books as a place to stop (as there is no reason to stay as a tourist) according to the authors of various guide books), and yet globalization hasn't passed it by. At first glance you can only find a few symbols of globalization, that are spread all over the world such as Coca-Cola or Pepsi. But taking a closer look, there are many more.

Food, Non-food, Drinks, Hygiene Products

International food and drinks produced from brands also known in Europe, only can be found in shops, that we would call supermarkets. Supermarkets seem to be very rare in Singida, as we only found one of them.

For purchase are products which are familiar to us, e.g. Knorr Aromat, Hennessey Whiskey, Coca-Cola, Colgate toothpaste or Nivea shower cream. But also products which are not available in Europe, e.g. Nestlé Nido (milk powder) or Coca-Cola Krest (bitter lemon).

In the non-food sector we found a wide range of well-known brands, such as Duracell, Gillette, Panasonic, Winston (cigarettes).



Image 53: International brands in a supermarket

Transportation

There is a lot of traffic in the city of Singida, as it seems everybody either uses a car, a bicycle, a motorbike, or some other kind of vehicle. But only a very small percentage of vehicles are recognizable from our context.

Trucks produced by Scania, Nissan or Isuzu can be found, as well as some cars by Toyota or Hyundai. But most of the vehicles are by manufacturers which are unknown to us or not sold in Europe.



Image 54: Volvo digger working on a construction site

Clothes

Most of the clothing brands outsiders will recognize from their context are represented by the sports sector, e.g. Adidas, Nike, Kappa or Jako. The percentage is very small, but mostly visible as football jerseys. It is not clear if they are originals, second hand, or imitations.

Communication

As the only recognizable telecommunication company also known in Europe, you'll find Vodafone operating under the name of Vodacom. A very little amount of Samsung cell phones can be seen. Television-wise, Nickelodeon and CanalPlus (French private tv) were also recognized.

Others

Brands or companies from a construction context can be found as well, e.g. Heidelberg Cement, one of the global players in this sector.

Conclusion

In Singida you can easily find your daily needs in terms of drinks, food, and communication. Special needs which are a must have on a construction site will take longer to find and might be expensive. So do not expect to walk in a building supply store and find something you need within minutes as you may be accustomed to at home.

Building Typologies

Typology I: Single Shotgun House

The 'Single Shotgun House' is probably the most common typology within Singida. The traditional interpretation of the term 'Single Shotgun House' refers to a bullet that can fly straight through the house without causing any damage – assuming that doors and windows are open. In contrast the term can be traced back to the 18th century when it was used by Afro-Haitian slaves. According to Prof. John Michael Vlach the term may have its origin in the Dahomey Fon area term 'to-gun' which means 'place of assembly' and was possibly reinterpreted as shotgun. In the urban context this typology is not only used for family housing but also for business uses, as workshop or office space. Especially in close proximity to the main roads, the street facing houses are primarily used for business, selling all kinds of goods. Mostly those houses are only one-storey buildings made of clay-bricks or concrete-bricks supported by a foundation made of concrete or natural stones from the neighborhood. The walls are commonly plastered lacking generous weather protection like roof overhangs. The roof is mostly made of corrugated iron sheets. As variations of the simple roof shape one can also find hipped roofs and pent roofs. The entrance area is frequently emphasized with a cutout (corner or gable end) or a canopy above the door.



Image 55: Single-Shotgun House example I



Image 56: Single-Shotgun House example II



Image 57: Single-Shotgun House example III

Typology II: L-Shape

The L-Shaped house can be seen as a variation of the Single Shotgun House. Usually one can find at least one additional room connected at a 90-degree angle. This generates a more intimate situation at the front or at the rear side of the house, which is commonly used as a seating/meeting area. The shape is frequently placed at street corners offering a welcoming entrance with a bend corner. The L-shaped-house can easily be complemented with a third building structure which generates our next building typology – the open Patio-House (U-shape).



Image 58: L-Shape House example I



Image 59: L-Shape House example II

Typology III: Patio-House/Courtyard

This type is very popular due to its versatility and the privacy it generates. Core family life activities and most daily routines like cooking, washing, education etc. especially take place in the courtyard. Some buildings grow over time depending on the needs and the amount of family members. Flexibility is important, as you can easily recognize different construction phases. Frequently wings of the ensemble grow up to two stories. Traditionally, the family represents the social network for all members from birth to death and the building has to provide shelter for all of them. The inner organization is usually very clear since there is no need for corridors and one enters every room right from the patio. The overall space requirement is a little bit larger than the ones for type I and type II. The Patio-Houses we found were built in lots of different orders. The versatility of the design also makes it very popular for workshop and restaurant uses. The shape of the roof is dominated by simple shapes like saddle or hipped roofs.



Image 60: Patio-House example I



Image 61: Patio-House example II



Image 62: Patio-House example III

Typology IV: Bungalow

The bungalow is rarer than the first three types but is also a good example to show the inner organization of a family. Usually, there is only one central room where everybody meets and day-to-day work is performed. This room is the core, the heart, of family life and all the other rooms are connected to it. Bungalows are frequently rectangular shaped and have a tent roof, the depth of which generates a low lit core. The shaded areas are very welcoming and it stays quite cool during the day.



Image 63: Bungalow example I

Typology V: Special Structures

With this umbrella term we refer to buildings such as churches, schools, offices, municipal buildings, etc. The structures we found are usually built with concrete blocks or in-situ concrete. When looking at their context and surrounding buildings, we are tempted to use the term 'leap in dimensions'. These buildings generally shape their district in terms of both vertical appearance and identity. Due to the diminished city silhouette one can easily see bigger or higher buildings from far away, which makes it easy to orient oneself by spotting the 'special structure' close to one's own building. The buildings become a sort of 'district identifier' everyone is aware of.



Image 64: Special structures example I



Image 65: Special structures example II/III



Image 66: Special structures IV



Image 67: Row house typology

General Findings

Unfinished Structures (WIP - Work in Progress): it is quite remarkable that there is such a large amount of houses where their construction is suspended halfway through the process. The work in progress aspect shows us the very nature of a process that is seen as a long-term task. One proceeds step-by-step depending on the money one can spend and the material one can afford. We found these structures literally everywhere – in the middle of the city, on the outskirts, as well as in rural areas.



Image 68: Unfinished structures example I



Image 69: Unfinished structures example II

Two-storey houses: The two-storey house is common where space is limited and one has to come up with new approaches due to a lack of space. The density usually found in city centers makes it a good solution for housing more and more family members of a growing clan.

The second storey can be built upon the entire ground floor or just on one part of the existing house. Adding space is necessary during the lifetime of a building. Once more, this shows the vitality of a building and the unfinished character of the process of construction.

Multi-storey houses are a signal of wealth, since they require more solid construction and better building materials.

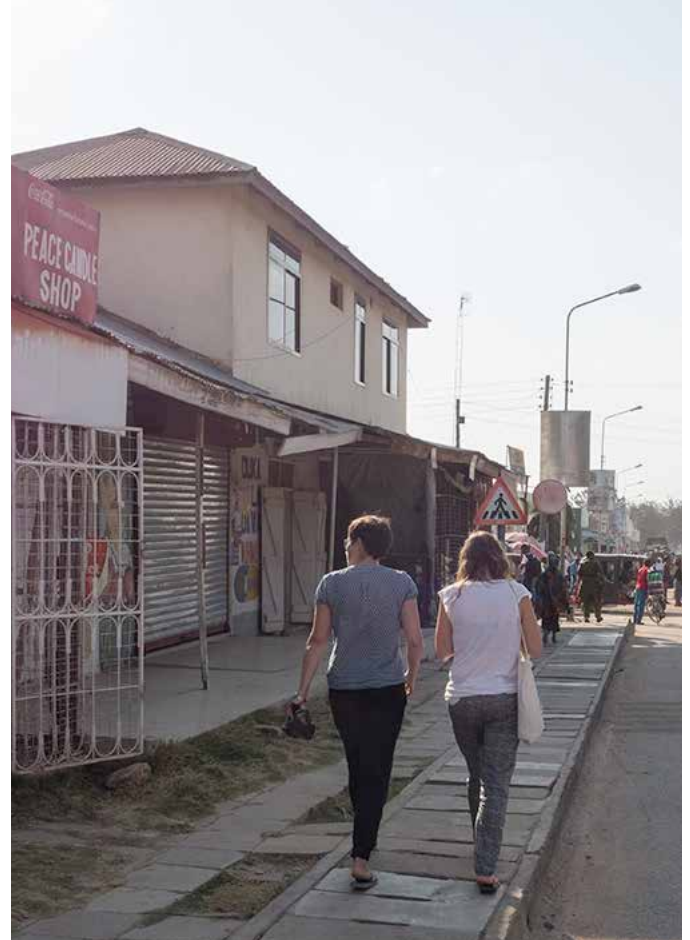


Image 70: Two-storey house examples

Construction Methods and Materials

There is very little variety in the type of construction found in Singida. Most residential structures are built using traditional brick. Those who can afford it, use concrete block. All others use brick made out of mud and clay. Since most roofs consist of metal sheets without large overhangs, there is no constructive weather protection. Earthen bricks need regular maintenance to keep them looking neat. If there is no one to take care of earthen buildings (which is most cases), the buildings tend to look derelict and shabby. This can be recognized as one of the reasons why mud continues to have a bad reputation and is considered to be a **material of the poor**, signaling a low status of its inhabitants. If we want to face the truth, **overcoming this stigma** in the near future is quite a large undertaking.

It is worth mentioning that there is a vast production of local brick, where concrete blocks and clay bricks are manufactured at a good standard of quality. They seem to be quite durable and are definitely worth considering as a construction material. Besides the rapid availability, it further supports local industries and increases their sales.

Outside of this majority, there are a small amount of public and commercial buildings made from cast-in-place concrete. This is the most expensive and therefore, the most prestigious way of construction. Due to the high costs and the immense effort needed for timely procurement, it is only mentioned as a side note.

As most people might expect, there is a number of intensely colored façades. These can be perceived as an expression of personal taste and character. An evaluation of the added value to the surroundings is left to the observer.



Image 71: Example of coloured façade

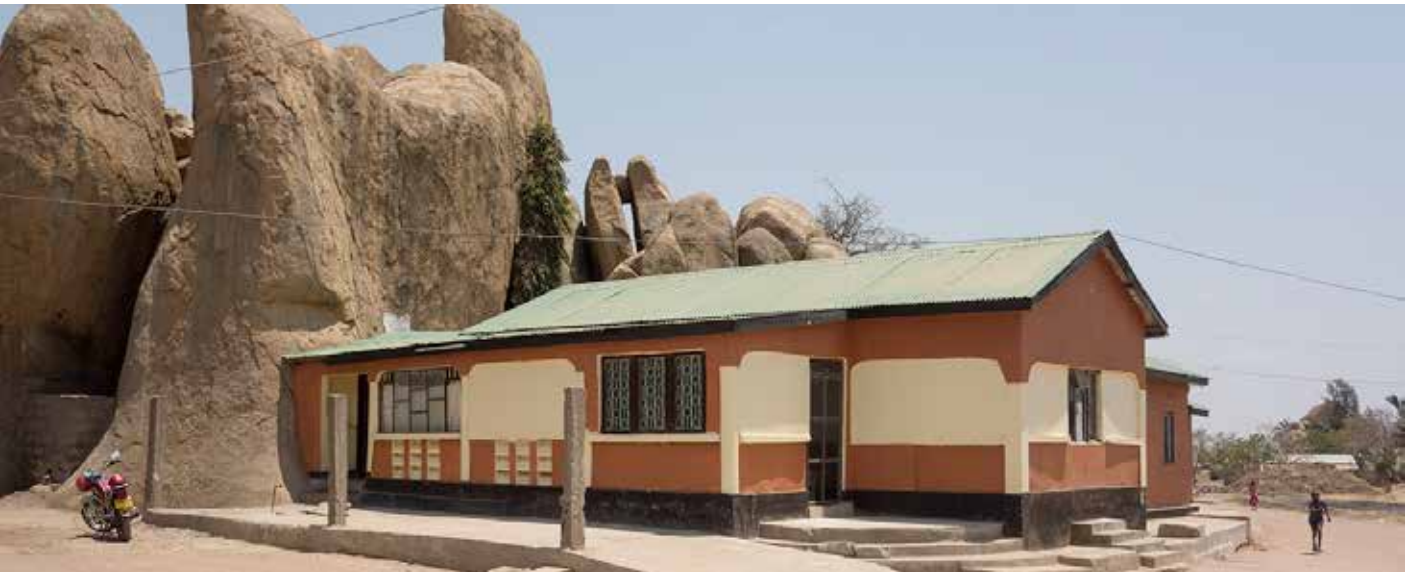


Image 72: Example of richly decorated façade



Image 73: Building methods example III

Cost Indicators

The following information provides only a rough idea of typical costs, given in Tanzanian Shilling (TSh), you may need to consider while building in Singida. Costs were taken from another workshop held in 2016 in the rural area of Tanzania and also determined at the market place. The inflation rate for 2017 is approx. 5% (Trading Economics 2017).

Material	Costs (TSh)*
stones, truck load	75,000
sand, truck load	95,000
gravel, truck load	220,000
transport, general	10,000
screws, per kilo	2,000
cement (Simba), per 50kg	14,000
metal sheets, per 10 pieces + transport	165,000
wood (Moresi), 8"x1", per piece	17,000
Labour	
unskilled worker, per day	10,000
skilled worker, per day	20,000-25,000

Groceries

bottle of water (1,5 litres)	1,000-1,500
softdrinks, per bottle	1,000
beer, per bottle	2,500
rice, per kilo	2,400
bananas, per piece	100-200 (depends on the size)
pineapple, per piece	2,500
sunflower oil (5 litres)	18,500
sugar (1 kg)	3,000
common meal in the street	>2,500

* All information is subject to change.

CHAPTER V.

BUILDING SITE



Nka Site

Location

The site which Nka foundation acquired ownership of is located in close proximity to Lake Singida. However, it is located some distance away from the centre of town.

According to GoogleMaps the distance is about 7.5 km following the main roads. The amount of time for walking is estimated as 1.5 hours. In case you do not follow the main roads and use trails along the lake takes even longer. By car, it is only a 15 minutes ride.

The site is located outside the city boundaries, which means it is not affected by formal town planning processes such as master plans. However, architectural drawings have to be provided to the local municipality to get permission to build. The municipality verifies, for example, the adequate use of land and the minimum spacing between the building and the plot boundary. There is already a general approval for the construction of a so-called Arts Village for the given site from the authorities.

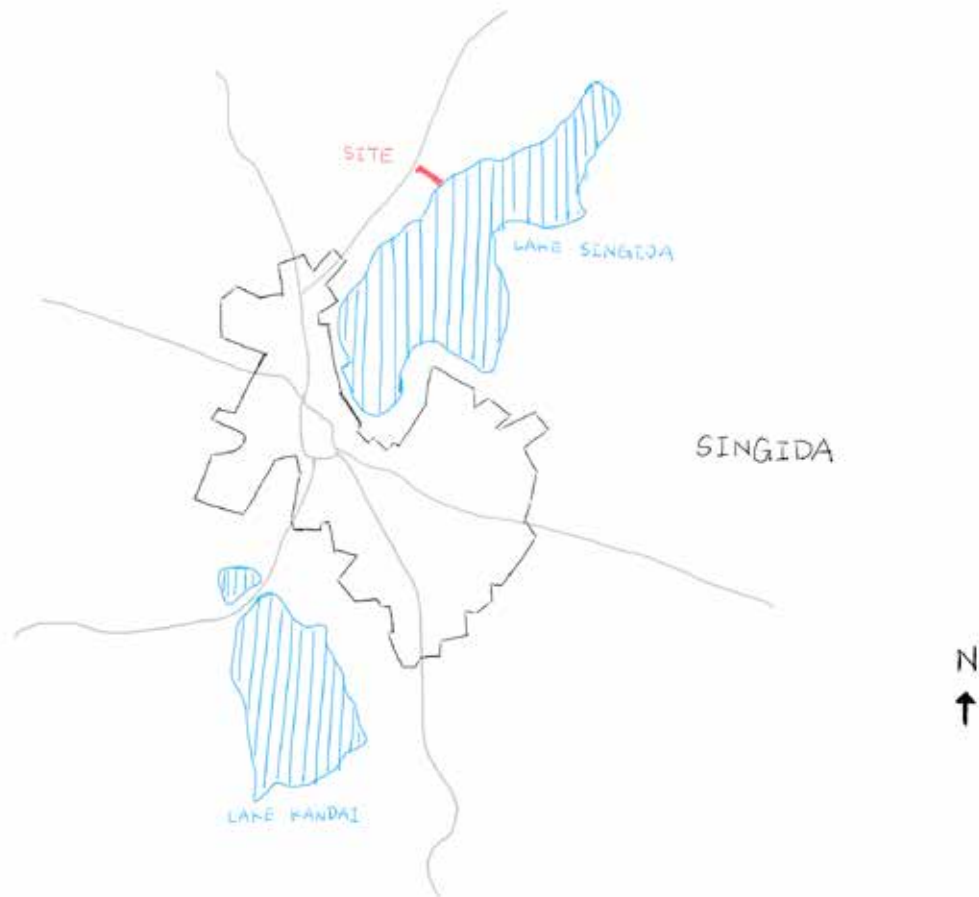


Image 74: Building site of the Arts Village

Accessibility

The nearest road is B141, which goes to Ilongere and Mtinko, and is located north-east of Singida. Besides some informal trails, there is no access to the property of the road, since there are several private plots in between. The site itself is not visible from the road. The lake is in close proximity and can be seen from the property, although they do not border each other.



Image 75: Walking path next to the main road leading towards the building site

Surface

The property itself is more or less flat, featuring only smaller rocks and small surface irregularities. It is covered by many thistles, various grasses, and bushes. There is a slight slope downwards towards the lake.



Image 76: Pictures show the non-builtup area

Buildings on site

There is only one building constructed so far on site, built by Marco Grimm and his team in 2016. The house is called 'Nanasi Home'. Unfortunately, it experienced some damage due to heavy storms. In 2017 it got a new roof, however extensive repairs are necessary to make the building useable and inhabitable.



Image 77: Building on construction site by Marco Grimm and his team



Image 78: Location site in detail

Conducting a Building Workshop

To organize a building workshop in Singida you should keep the following things in mind:

- » The government of Tanzania requires Business Visas in case of conducting a building workshop in Tanzania. In particular in Singida foreigners are still attracting a lot of attention and your activities will not remain unnoticed. For ordering business visas before arrival, please check the information of your embassy. An invitation letter of the organization 'Environment Foundation for Development' (EFD) might be helpful. For German citizens the costs are currently 200 USD per person and are valid for 90 days. For those whose stay exceed more than three months needs to apply for a Resident/Work Permits.
- » Electricity is not available 24h/day. This should be considered for your construction phasing. So far there is no electricity on site. Solar panels are locally available.
- » There is no running water on the Nka site.

Since Singida is not one of the major cities in Tanzania, the possibilities for purchasing tools for construction is limited. Special tools should be brought from abroad.

CHAPTER VI.

CULTURAL ANALYSIS



History of Libraries in Tanzania

„For poor Nations a Library Service is vital“ : Establishing a National Public Library Service in Tanzania in the 1960s (Olden 2005)

Tanganyika Library Service (TLS) = founded in the 1960s

- » 1948: Foundation of the East African High Commission, to organize public services in Tanganyika, Zanzibar, Kenya and Uganda. It established an 'East African Literature Bureau', to deliver books to the four territories.
- » 1952-53: 'Mail and book boxes' (100 books, changed three times a year, under local supervision), mixed success, 51 library centers were founded in Tanganyika but there was a lack of publicity and communication (particularly in schools)
- » 1958: Foundation of a new subscription library, the 'King George VI Memorial Library' in Tanga : 200 members (7 African members)
- » 1960: Hockey: a new 'libraries development organizer' comes to East Africa, suggests that each state should create a central free public library service in its territory.
- » 1961: Independency of Tanganyika, President Nyerere, (very involved in education and socialism), establishment of the University College in Dar es Salaam (first university in Tanzania)
- » 1963: The King George Library has now 778 members (50 Africans) + TLS Board with Broome (new 'founding director of library services'), goal : start with the establishment of a sound administrative structure and a strong headquarters organization, to then spread the system. The first 'truly public library' opens in Iringa (300 miles of Dar es Salaam). The initiative comes from the local town council, a danish librarian and an adult education lecturer. 3000 books.
- » 1965: The first pilot library is opened in Dar es Salaam : very huge success, more than 3500 members (becomes too small very quickly), the King George Library becomes part of the TLS
- » 1967: Foundation of the new National Central Library, Arusha Declaration (Socialism)
- » 1969: Branch libraries are built in Iringa, Bukoba, Mwanza, Kibaha. (original goal was to build 15 branch libraries)
- » 1970: The 'Directorate of Adult Education' (Ministry of Education) develops a parallel book distribution system for small rural libraries (more financial support than TLS but worse management)
- » 1972: The first non-graduate certificate for 'library and information work' in Tanzania
- » 1980s/90s: Money shortage: business deal between the TLS and the private sector (housing is built in the floors above the new library in Dar es Salaam). Introduction of subscription fees

Nowadays

'As far as book supply goes, providing a service to the villages is almost as far away now as it was when the Tanganyika Library Service was set up over forty years ago. Urban areas, however,

have privately run Internet cafes, while the Tanzania Library Association puts on short courses to familiarize long-serving library staff with the new technologies.’ Even though in the past, ‘the majority of African readers regard the library service as an institution of informal education rather than a social amenity service’, nowadays most of the readers are ‘young people raging to advance their level of formal education’.

Problems identified

- » high illiteracy rates
- » very few books written in Kiswahili
- » most of the general literature had no relevance to adult life (before the independency)
- » subscription fees (particularly for children and teenagers)
- » big distances
- » TLS orientates itself towards foreign minorities, local elites, urban population
- » lack of trained staff
- » the publishing companies used to belong (still belong?) to the state = no private publisher

“We do not have a reading culture in Tanzania”

Student of Architecture/Interior Design from Ardhi University in Dar es Salaam

Sociocultural Survey

In order to provide a comprehensive analysis of the current situation in Singida and to assess the sociocultural aspects relevant for the project, semi-structured interviews with teachers, students, librarians, politicians, and others; focus groups with teachers and students; and participant observation were conducted over the span of several days at different locations in and around Singida.

Semi-structured interviews have been described as combining the ‘flexibility of the unstructured, open-ended interview with the directionality and agenda of the survey instrument to produce focused, qualitative, textual data’ (S. L. Schensul, J. J. Schensul, and LeCompte 1999, 149) and therefore held to be well suited for the proposed exploration of the factors central to buildings (specifically libraries) in the context of Singida. Participant observation, defined as being the method of recording and analyzing the information gained through the inherently human behavior of participating and observing (K. M. DeWalt, B. R. DeWalt, and Wayland 1998, 259), was used to reduce the reactivity of informants and employees in libraries and schools, as well as in everyday situations to gain information regarding the modes of interaction with architecture, books, and knowledge in general.

Additionally, focus groups were used as the social and semi-public character of this methodology produces data reflecting combined local perspectives (Grudens-Schuck, Allen, Larson 2004). Over the course of different focus groups, both teachers and students were asked to either produce short drafts on their own, or to give their opinion on presented buildings.

This section will begin by presenting a short overview over the current situation in Singida, the various groups of prospective clients for the library, their interests and motivations, followed by a more in-depth analysis of the central aspects emerging from the data. It concludes with a report of a Design Thinking Workshop held on this topic in Dar es Salaam with students of related subjects from Tanzania and Germany.

Current Situation and Prospective Clients

As already stated, Singida is the capital of the region bearing the same name. As it is usual for regional capitals in Tanzania, Singida is home to a regional library, located on one of the main streets in the city centre (see “Our Mental Map” on page 22). Additionally, many of the public and private schools in the area have their own school libraries, available only to their own students.



Image 79: School library in Singida



Image 80: School library in Singida

The school libraries are generally equipped with only a few books (less than 100), mainly in English, and related to the subjects taught. In many cases there are adjoining rooms for studying the books or students' own materials, borrowing materials is only allowed in few cases. The libraries are open until the afternoon, but closed during holidays, so a lot of the students who use the facilities for studying have to move to other places (such as the regional library) when preparing for exams.

The regional library itself is slightly better equipped. Upon entering, one passes a small shelf where bags can be left for the duration of the stay, as well as the desk of the librarian who is also responsible for checking the IDs of people entering the library. In the same room, books are stored on shelves along the long side of the room, and heavy wooden tables and plastic chairs can accommodate 30-35 people for reading and studying. The librarians office and a small workroom are located at the rear end of the room.

Purpose of Reading

In Tanzania reading is associated with:

- studying
- learning
- formal education

It is NOT associated with:

- enjoyment
- freetime
- fun



Image 81: Entrance to the Singida Regional Library



Image 82: Inside the Singida Regional Library



Image 83: As it is located in one of the main streets in downtown Singida, a lot of people studying in the regional library feel disturbed by the noise.

Here again, the books (though even more in number) were predominantly English non-fiction books, sorted into different subjects, ranging from the natural sciences to medicine. Few books for children were available, and only one shelf was reserved for belletristic in Kiswahili. Often there were 3-5 copies of the same book available, and many of the books looked almost completely new, while others were read so often that they almost fell apart. This and the fact that many students present in the library were studying from their own notebooks was taken as a sign that their reason for visiting had more to do with having a room available for studying and not the access to books. The library was visited on several days at different times, and there were always at least around 5-10 people sitting inside, mostly students preparing for an upcoming exam. However, during the interviews conducted here, it was stated that during holidays, often all the available seats are occupied well before lunchtime. Although the students themselves seemed to be very eager to maintain a silent atmosphere so as not to disturb the others, the room often was filled with the noise from the street outside, as the door and windows of the library always remained open, most likely to provide a minimal amount of air circulation in the room which itself has no air conditioning. Despite all these aspects, the library was seen as one of the best facilities for studying in the area, with some students walking more than one hour to reach it, having to leave early to be able to secure a seat.

In general, the main clients of the available libraries are students. Even in the regional library, which is theoretically open to everyone in Singida, only one non-student, who sat there for a short time to read his newspaper, was encountered; children were not seen at all. Although this of course might change during other times of the year, it confirmed one central aspect of the interviews, namely that **libraries are seen as being something for students to study in**, and neither working people, nor children nor older citizens see a reason to visit a library frequently. The proposed ways to motivate people from other fields or stages of life to visit a library range from a larger variety of

books in specific fields (such as religion or short stories), to events such as story-telling or crafting workshops. Some initial ideas are discussed further below.

In conclusion, although there are several libraries present in Singida, both inside and outside of schools and colleges, the **three main issues reported as being problematic are: the variety of books available, sufficient space for those wanting to study, and the lack of motivation provided for citizens other than students** to visit the facilities. The proposed Community Library in the Singida Arts Village should be designed to tackle these issues while taking into account the aspects which were reported by the informants and are discussed in the following section.

Building Design and Structure

Besides functionality and an understanding of aesthetics, the perceived status of a building has a huge influence on the attractiveness it has for people in Tanzania. One central aspect in this is, as already mentioned, the **materials used**.

“If you want to construct good minds the building must attract people from the outside”

Secondary School Teacher from Singida

In general, earthen architecture is seen as being a sign of little wealth or even backwardness, as strongly voiced by many of the informants when asked to rate the attractiveness of several different buildings. A public space such as a library has to especially take this into account. A design has to be developed based on the respective materials and simultaneously be appealing to people in a way that encourages them to visit the building. Similarly, the choice of roof conveys a strong message regarding status and wealth, with **metal roofs** being described as the preferable option. Some described buildings with multiple stories as being impressive, while others disagreed, arguing that ‘people here don’t want to be that far up’, especially while reading or studying. Another point where the informants voiced differing opinions was the preferable **choice of color**, with white being held to be attractive, symbolizing an idea of inclusion, and fitting with the climate, while others opted for a darker option, expecting the earth and dust of the surroundings to otherwise quickly result in a rather unattractive or dirty appearance. The consensus, however, was that ‘unfinished’ **façades**, namely those where bricks or mud were still visible, were rejected.

“You should design something like a monument for the people to recognize”

College Student (Urban development and City planning), Dar es Salaam

A number of ideas arose during the focus groups about how to **differentiate the library** from other buildings so that people from far away and foreign to Singida could immediately recognize it and its purpose, an aspect everyone agreed on as being important. Some would use a different color than the usual beige or brown, while others recommended pictures or paintings, or even monuments which would help to attract people’s attention. None of the interviewees knew about any specific local symbols used for representing libraries or knowledge and learning in general, but agreed that introducing a sign or logo to make the purpose apparent from the outside would be beneficial.

Arrangement of Rooms

Regarding the arrangement of rooms, the central concept was the **spatial separation of different areas** or clients. All the participants agreed that visitors should also have the possibility to discuss with one another. The need to have separate rooms for group discussions or noisy activities, and for silent studying and reading was repeatedly voiced. Some preferred the separation to be between different groups of clients, such as children, students, and working people, as they expected the behavior within the library to be radically different amongst these groups. As many expected a lot of people to come from further away to use the library and stay there for several hours, the idea of a **resting room** was introduced, providing a place for recovery or even to sleep for those exhausted. Adding to the concept of a community library, several informants also mentioned that separate rooms for different ways of accessing knowledge might prove useful, so that those using computers wouldn't interfere with those reading books, or those wanting to share a story or to have a workshop could do so without disturbing those working silently.

“Education is not just about books, it's also about exchanging and discussing!”

College Professor (Community Development), Singida

In one of the focus groups, secondary school students were asked to draw a rough concept of what they would describe as being a suitable room arrangement in a library. In the two concepts below, one can see the importance of separate departments, as well as further ideas regarding the design of the surrounding areas and concepts for alternative uses, some of which are discussed further.

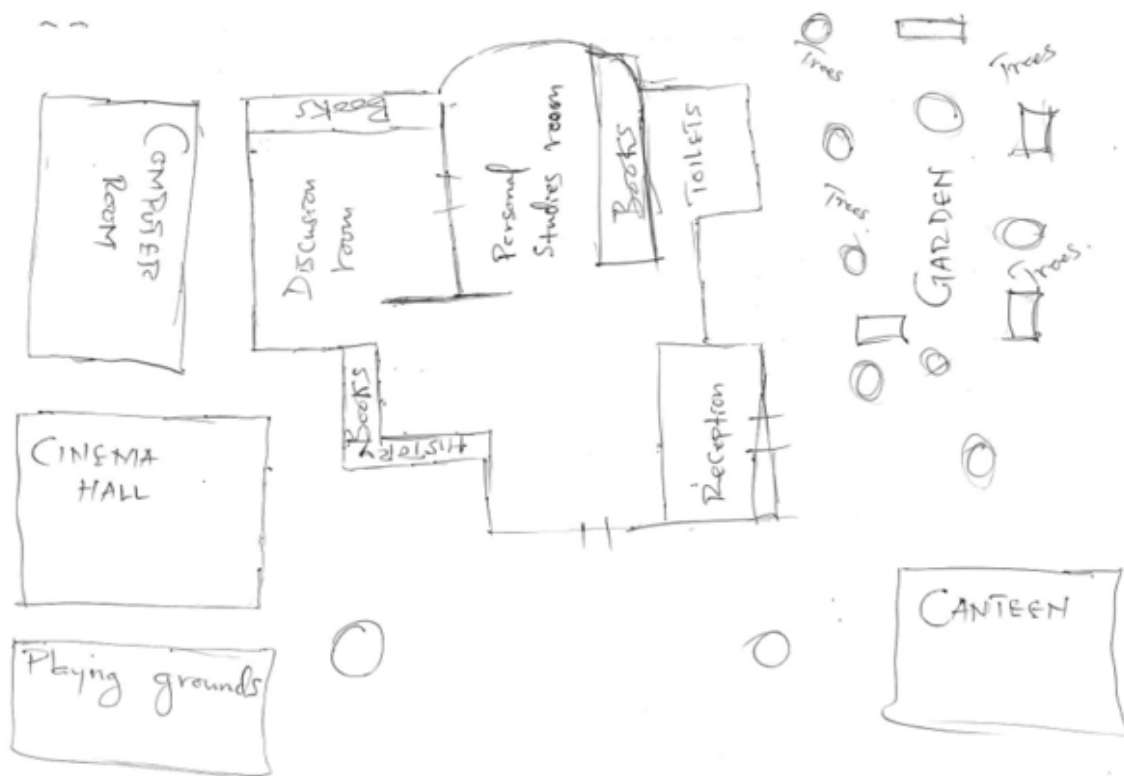
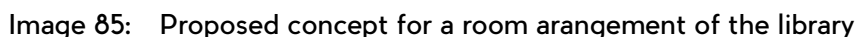


Image 84: Proposed concept for a room arrangement of the library



Regarding the interior design, here again, the **color and design of the walls** were disagreed upon. Although it was seen as being less problematic to keep white walls clean on the inside than on the outside, still some preferred more colorful options, while others again wanted white walls with pictures and artworks, an idea rejected by many as this might be too distracting while studying. It was agreed that both **chairs and tables** should be available in sufficient numbers and comfortable enough so that sitting for a longer time is possible. Some informants voiced concerns that any furniture might raise the noise level when moved and therefore everything, especially the chairs and tables, should be bolted to the floor. Others argued that there should be the possibility to adapt the furniture arrangement to the situation and therefore opted for furniture designed with as little friction as possible. The **shelves** for the books should be adequate in regards of number, size, and material, with ideas introduced ranging from them being directly built into the walls to metal shelves which could be moved according to the availability and sorting of books. For those who visit for reasons other than studying, possibilities would be appreciated to sit or lay down comfortably to read novels or to rest.

The above mentioned climatic conditions in Singida were often mentioned by the informants as being central for any building design. 'Here we have ten hot months, so everything has to be designed according to the climate so that working is possible', one teacher reported, leading him to the conclusion that **big windows** and an **elevated roof** would help to increase air circulation. **Glass** windows would be ideal, perhaps even with an **aluminum coating** to reflect sunlight, so that the opening and closing of them according to the climatic situation is easy with no dust entering the building. It is quite common in Tanzania to build big windows which then, if glass is currently not an option, are temporarily sealed so that they can be reopened again once the needed glass

becomes available. Otherwise, curtains could be an option, but wooden covers for the windows were rejected. **Fans** and even **air conditioning** are often used to improve the indoor atmosphere. Although the informants were most concerned by the hot months, many mentioned the challenges posed by the other seasons, too. As it can get quite cold in winter and only a few buildings in Singida have a **heating system**, this would be another possible unique selling point of the library. The rainy season was held to be even more problematic: several students reported how disturbing the noise the rain produces on certain types of roofs can be, and this should be taken into account when choosing materials. Others were concerned that people would bring a lot of mud inside with their shoes, and not only during the rainy season. They explained that the cleanest buildings are usually those which have a **broader sealed** area around them, so that the mud doesn't come directly to the doorstep, or even don't allow people to enter with their shoes on altogether. Another central aspect regarding hygiene was the location of the **toilets**. While many voted for the toilets to be located outside the building, some due to hygienic and some with religious reasons, others argued that the toilets should be as close to the people using the library as possible, so that as little time as possible is lost.

Surrounding Area

One aspect all informants could agree on was the importance of **well-planned surrounding areas**. As can be seen in the case of Singida's regional library, easy accessibility often comes at the cost of rather noisy surroundings, understood to be detrimental for studying. As one secondary school teacher puts it: 'The library should be away from other people because of the noise!'

Various facets necessary to make the surroundings suitable for outside studying were reported by the informants, the most central one being the presence of sufficient **trees**, both in number and size. Trees were not only seen as being beneficial to the microclimate on site by improving air circulation and providing shade, but also as being symbols for the understanding of the **interconnectedness of humans and nature** in the local culture.

"I study differently when I study mathematics than when I study a novel. A novel I can read outside as well"

College Professor (IT), Singida

Similarly, the **general equipment** necessary outside such as **chairs and tables** was requested by one informant to be as natural as possible to blend into the surroundings, making it possible to leave them outside all year and respecting symbols of nature. A **garden** was described as a place to provide a comfortable atmosphere for socializing, reading novels or just for taking a break from studying. At the same time, groomed gardens serve as a barrier against snakes and harmful insects, which might be specifically relevant due to the lake being in close proximity to the library.

A **fence**, for example consisting of bushes as often the case in this area and as proposed by one informant, could serve not only to have a clear boundary for the site, but also to make it easier to make sure that the books taken outside for reading aren't taken off site.

“To attract people for the library you should consider the outside environment. You can create a good environment and people can get drinks while reading the books. I insist on the outside environment to attract other people.”

College Librarian, Singida

Equipment

Hardly surprising, the equipment within the library was seen as being the one aspect which decides whether or not the building is able to satisfy the needs. As one teacher put it, ‘this is a library, so we’re talking about **books**’. As described earlier, libraries in Tanzania usually focus on study material, and the informants, too, first expressed the need for a **large variety** of non-fiction, covering all fields and subjects. This, of course, is one central aspect, especially when taking into account that students make up the most frequent client group of libraries in the area. However, this limited view was also criticized: as one vice-principle of a Singida-based school put it, ‘libraries are only focused on the subjects taught, so there is no broad horizon!’

“Libraries are about books, not about buildings”

Politician, Singida

The central idea that the broader the scope of books, the more diverse the groups of clients attracted by the library would be, was greatly supported. **Guidebooks, magazines, and newspapers** were held to be attractive for working or retired people, while children books and short stories would help to convince younger people to make use of the library. Similarly, providing **literature from all religions** would help reach a new group of students while at the same time might foster exchange and cater to the community idea of the library. Quite often the need for a **librarian** was articulated, who could both help with cataloging the books, providing information on what to find where, and keeping check of the books borrowed, for which a computer-based system was held to be most modern.

In general, a **computer lab**, combined with **internet access**, was mentioned as being something that would attract many people, as no other library is so far able to provide this. Especially college students reported what a difference the possibility to further research literature or information online would make. A room with a **TV** might be used as a room for relaxing or screening larger political or sports events.

“The content is more important than the design”

College Professor (Community Development), Singida

However, these aspects all require the availability of **electricity** within the library, and the proposed building site is not yet part of the public electricity grid. Even more important would be to take into account the possibility of installing **solar panels** on the roof, quite common in Tanzania. This would not only provide the necessary power at least for some basic electronic devices, but would be perceived over long distances as a symbol for wealth and modernity, making the library a more attractive building in general.

Accessibility and Site Specific Challenges

The proposed building site of the library, as introduced previously, poses several specific challenges and chances. Many informants appreciated its great distance from the hassle of the city or the cities noisy streets. The surrounding nature, especially the lake, was often considered to have a huge positive effect on air circulation and general well-being. However, the accessibility of the site was questioned repeatedly. The time people said they would be willing to spend to reach the library ranged from ten minutes to one hour, but all heavily depended on whether or not the paths to the library will be improved. Currently the route meanders through several fields and is only possible to find if one has already been there before. Therefore any proposal towards designing a new library should include a concept for improving its accessibility. One other aspect that had been discussed is whether people should pay an entrance fee for the library; some students argued that paying for it would create a sense of responsibility while others were of the opinion that a library should be free of charge in general. However, when discussing an entrance fee, everyone agreed that students should not be charged for its use. If at all, adults should be charged.

Summary and Conclusion

As repeatedly pointed out, **designing a library for the local context in Singida can't be limited to the design itself**, but has to take into account the current situation and the needs and concerns of the local people, as well as proposing ways in which a fruitful and long-term use of the library can be assured. The aspects reported in this section and summarized in Table 07 are not to be understood as obligatory or conclusive answers to questions of design and culture.

"If you want it to keep working, you have to go with the time. To change with time!"

College Professor (IT), Singida

They are reflections on the information gathered from interactions with the people in Singida. As usual, there were points of agreement and points of dissent, and it is not the purpose of this report to take on the decision for or against aspects included in the final design. It should instead provide the necessary knowledge needed to make an informed decision according to the ideas and goals of the architect.

Aspect	Detail
Building Design and Structure	<ul style="list-style-type: none"> - respective, sustainable materials which are appealing to the users - metal roofs - characteristic of a library to identify it as such
Arrangement of Rooms	<ul style="list-style-type: none"> - separation of areas according to needs of the users - separate rooms for quiet working and for social interaction - resting room
Interior Design and Furniture	<ul style="list-style-type: none"> - differing opinions: pictures that support learning vs. plain white walls - comfortable chairs - enough tables - bolted down furniture vs. the need for adaptability of the furniture - adequate shelves (e.g. metal) - possibilities for resting
Ventilation and Hygiene	<ul style="list-style-type: none"> - large glass windows with curtains (to keep the noise out) - elevated roof - fan or AC - heating system in winter - broader sealed area to keep library clean - toilets were mostly requested to be outside, but some also liked them to be inside
Surrounding Area	<ul style="list-style-type: none"> - well planned - trees to create shade and provide air - garden - chairs and tables for reading outside - fence
Equipment	<ul style="list-style-type: none"> - most important: variety of books and different sorts of literature - librarian - computers with internet access - electricity and solar panels - TV
Accessibility and Site Specific Challenges	<ul style="list-style-type: none"> - site for the library is located outside the town, to reach it takes approx. 30-60 minutes - no proper route or easily describable path - no electricity and running on site at the moment

Table 07: Short summary of the most important aspects mentioned by the informants in and around Singida.

One of the interviewees at first reacted with skepticism when he learned about the idea of building a library. Being a politician, he had experienced a number of library projects in rural Tanzania which ended up in beautifully designed buildings standing empty, unused, and ultimately abandoned without ever being used for their intended purpose. This was a result of a focus set only on designing a building and on developing an idea for its sustainable use along with it. Whether this is achieved through initiating cooperations with other organizations, through developing a usage concept for the building and providing the equipment to motivate a broad base of clients over a longer period of time, or through ways different from all of the ones mentioned, it is important to note that **building a library doesn't stop once the last brick is in place.**

CHAPTER VII.

DESIGN THINKING WORKSHOP



Preface

Design Thinking can be described as a systematic approach to innovation. Utilizing elements and methods from the designer's toolkit such as brainstorming and experimentation, the Design Thinking process provides a useful methodological framework for finding creative solutions for complex problems (Brown 2009).

Applying this framework, we aimed to complement our empirical research data and make a first attempt at exploring the intersection between human desirability, technological feasibility, and business viability for a proposed community library in Singida. We did this by seeking out multiple perspectives on this multifaceted issue.

Under the motto 'Designing Common Ground', we gathered a multi-disciplinary team consisting of eleven students and professionals from various fields from Tanzania and Germany. The workshop took place in Dar es Salaam for three days in September 2017 and followed the three main phases of the Design Thinking process: Inspiration, Ideation, and Implementation.

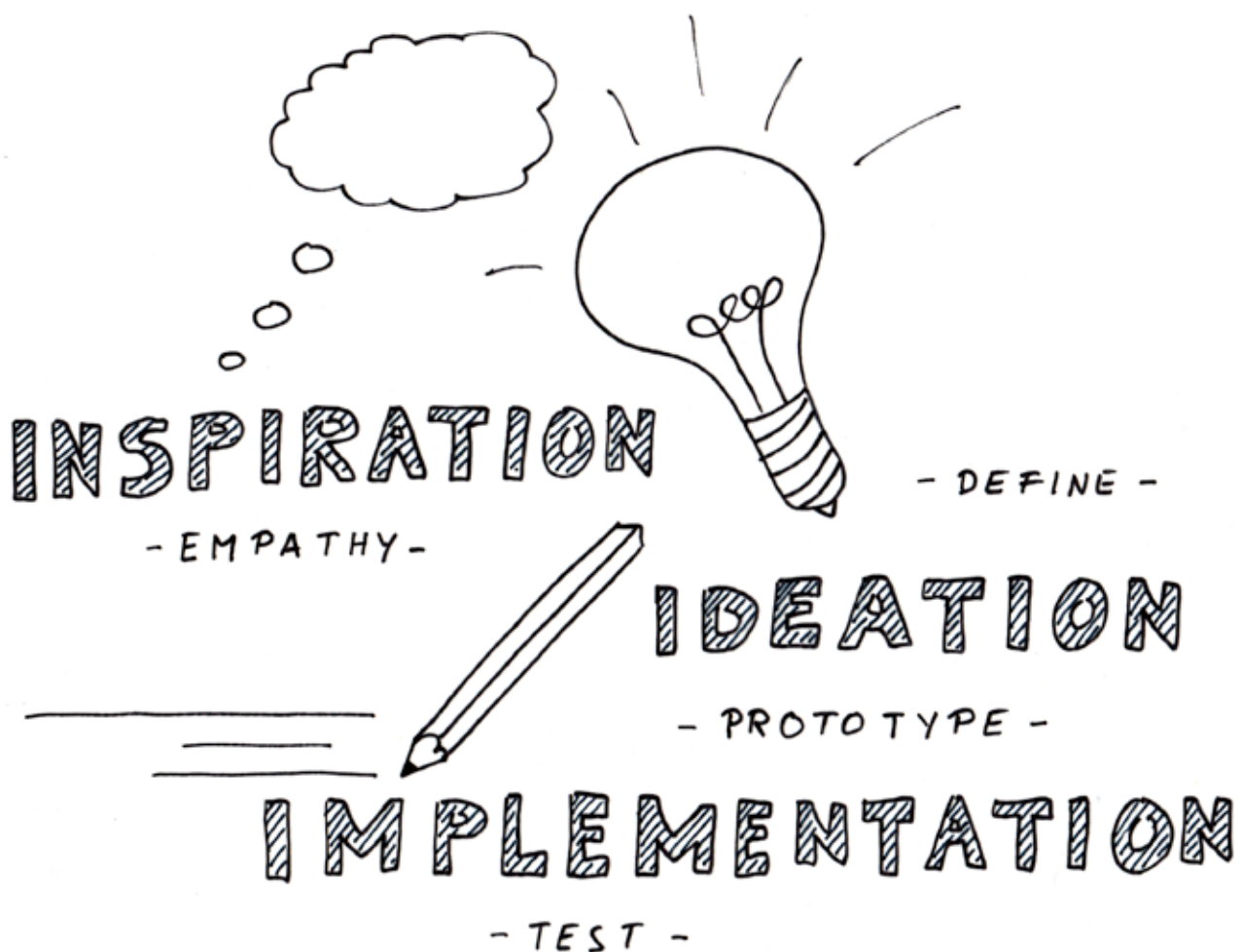


Image 86: Design Thinking process

On day one, after the team got to know each other through playing a few fun games, the 'Inspiration Phase' was characterized by taking a close look at the challenge of designing public spaces in Tanzania from various angles. Applying methods such as storytelling, discussing, and conducting interviews with each other, the team first arrived at a shared understanding of the terms 'common ground' and 'public space' and then dug deep into the needs of the Tanzanian people on this matter.

In doing so, the team defined six main clusters of human centered needs in the area of public spaces in Singida.

First, the participants agreed on the importance of the adaptability of public spaces, meaning that multiple forms of use of the said space would be a much welcomed asset.

Second, accessibility was a topic of intense discussions: as pointed out earlier, the proposed building site is located 30 minutes outside of Singida, therefore safe travel routes have to be established for students to get there.

Furthermore, the team stressed usability, safety, responsibility, and inclusiveness as important needs that one should address when planning the design of public spaces in Tanzania.

During the 'Ideation Phase' on day two, the participants used their insights from day one and narrowed down their focus on the design of a community library as one possible and tangible example of a common ground or public space for Tanzania. Using as a basis two self-identified and handcrafted personas of potential library users (one primary school child and one secondary school child), the team then took on the challenge of looking for creative solutions that met the potential user group's needs.



Image 87: Personas created in the workshop

After multiple iterations of individual and group brainstorming sessions, idea clustering, and intense discussions, the team narrowed down their proposals to five concepts that were then expanded on in further detail on day three. Continuing the workshop on the final day, participants were asked to draft a business model canvas relating to the key partners, resources, and clients of the proposed library. The goal was not only to evaluate the potential of a community library in a rural area, but to also consider possible challenges regarding the business viability and technological feasibility of the final approach.

Concluding this section, we offer the final concept ideas of the Design Thinking workshop as a way to encourage the further use of and to build on the resulting ideas, or to simply get inspired by some of the aspects shown in the final drafts.

Preliminary Ideas

Floating Bridge Idea

The floating bridge idea is a concept to increase the accessibility of the library, as well as to raise public interest. The bridge should serve as a shortcut from the town area to the library while at the same time encouraging environmental conservation and contributing to a unique identity of the area. Charging a small fee for using the bridge could help in generate basic funds for the upkeep of the bridge.

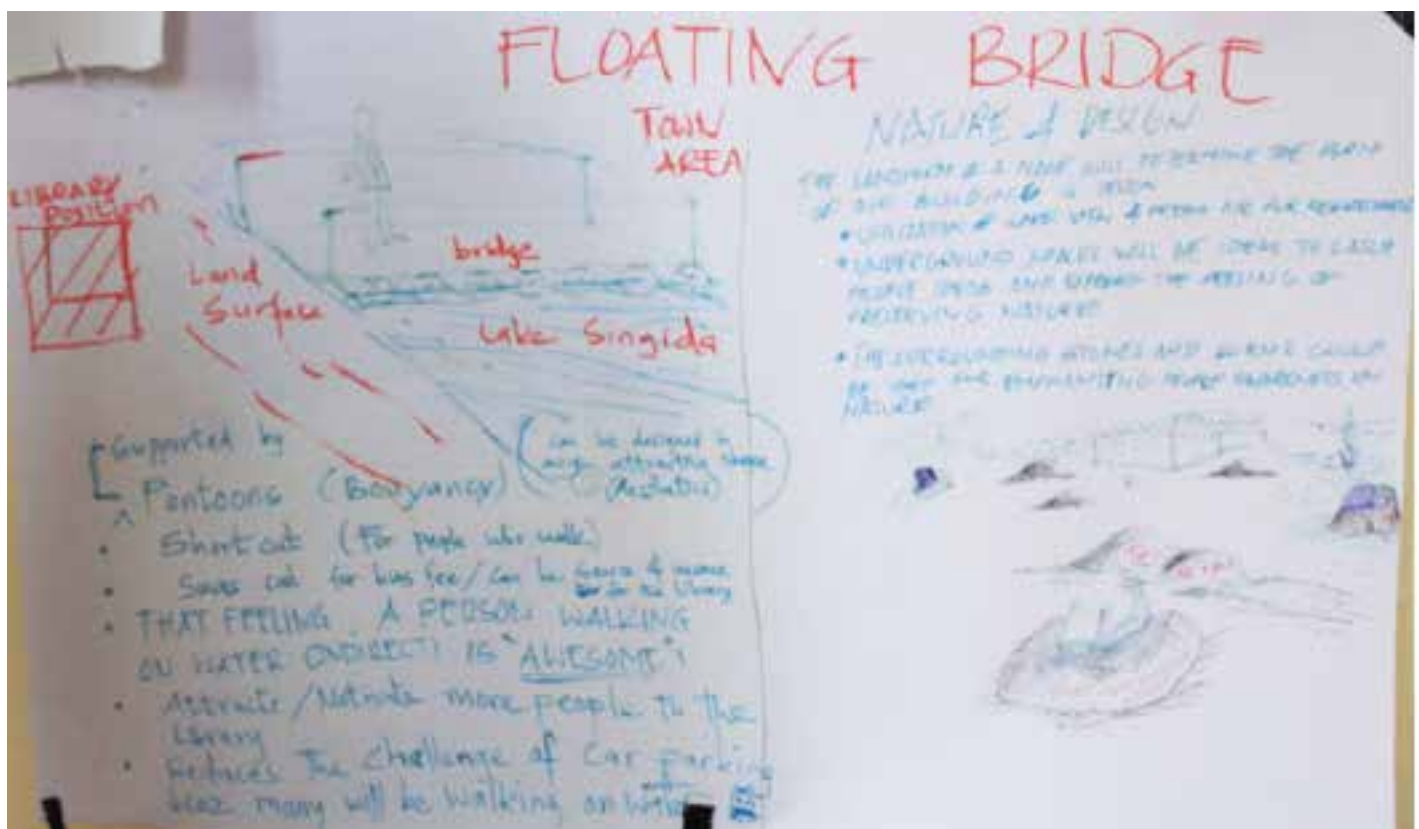


Image 88: Floating Bridge Idea

Facility Service Idea

The idea is to develop different concepts of usage for a library in order to increase the impact on the potential users by addressing the needs of different people. A yoga class or a dance course could attract people who are not only interested in the reading part but also want to socialise and engage in different activities, such as singing, dancing, computer work or teaching young children how to read. The library could also serve as a platform for those who want to offer such classes.



Image 89: Facility Service Idea

Naprary Idea

The main purpose of the 'naprary' idea is to offer people the opportunity for recreative breaks and therefore increased studying efficiency. Spaces for resting could also provide shelter for clients who come from further away and want to stay overnight. Another aspect of this idea is to integrate the surrounding nature in the building design.

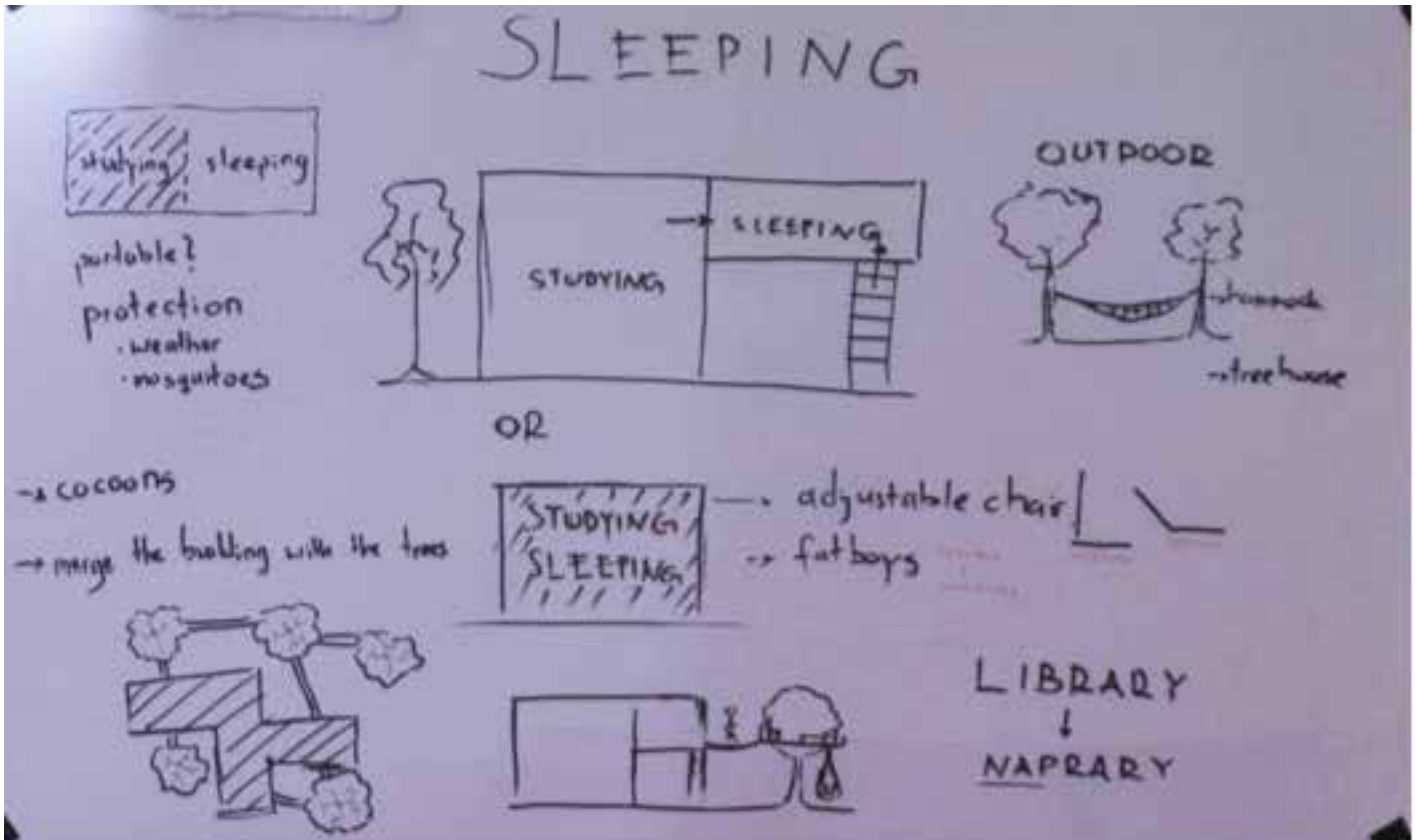


Image 90: 'Naprary' Idea

Education and People Idea

In this case the idea is to encourage people to find their own approach to reading and increase their motivation and self-confidence. Possible ways to foster this initiative could be cooperations with local schools, open door days, reading festivals, competitions or workshops.

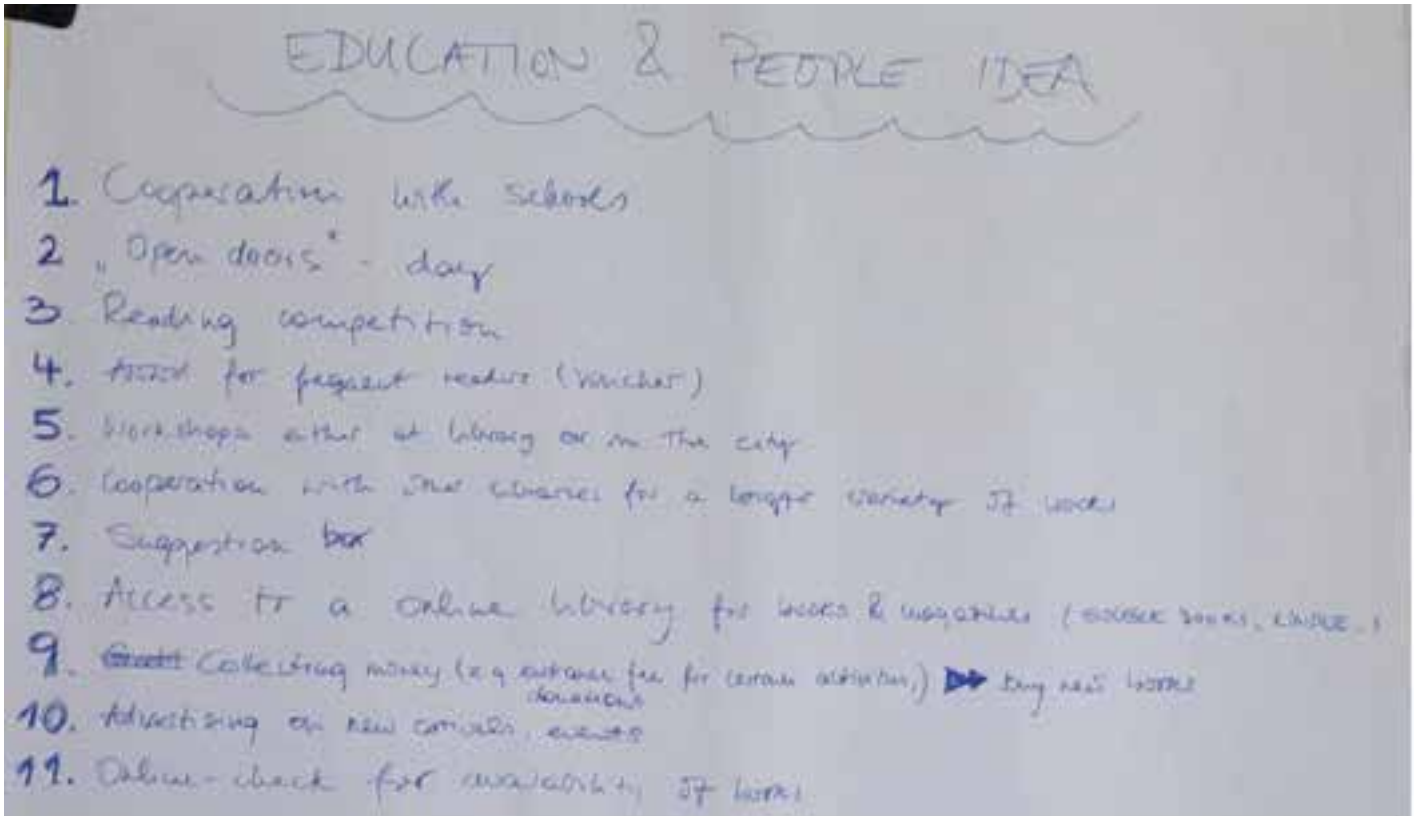


Image 91: Education and People Idea

Inclusive Interior Idea

The inclusive interior idea approaches the issue of separating different departments. The separate rooms provide facilities for clients working individually, as well as for those who want to share their ideas or engage in other, louder activities. Simply put, a library that offers space for separate interests and different ways of learning.

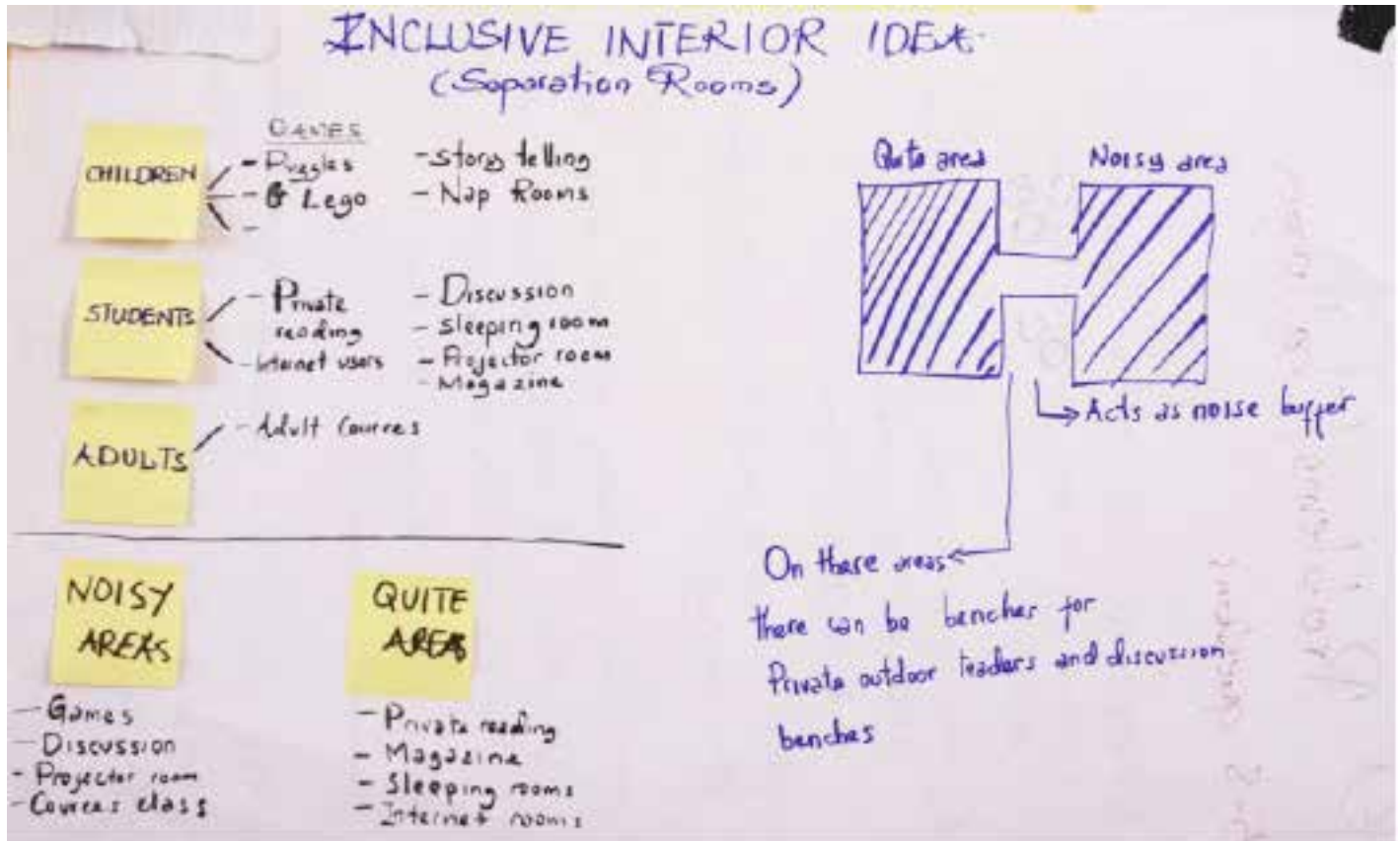


Image 92: Inclusive Interior Idea

Outlook and Open Questions



In a time where traditional libraries around the globe are confronted with dwindling numbers of visitors, and hardcopies of books become less and less relevant in our lives, it is essential to reevaluate the classic notion of a library. We should avoid 'exporting' an outdated version of a traditional, historic type of library to Tanzania. It doesn't seem to make sense to implement a building typology from the 19th century to Tanzania in the 21st century.

We want to strongly make the point that this is particularly important when designing a library for a significantly different context, both infrastructural and cultural, such as Singida, Tanzania.

Merely exporting the – essentially European – traditional concept of a library would result in a foreign body in the local fabric: a building, most likely, never fully put to use. In this report, we tried to give an overview of the national, regional, and local context to provide those who plan to propose a library for Singida with some of the background information needed for a contextually sensitive design. We, ourselves, of course, were only able to scratch the surface of understanding the cultural, historical, and infrastructural circumstances and challenges, and in the end are left with nearly as many open questions as we initially had arrived with.

- » What could a building look like that is able to satisfy the needs of as many parts of the community as possible?
- » How could the traditional concept of a library be extended to address and motivate people across communities and backgrounds? What is the underlying motive behind trying to engage people to use a library in general?
- » Library without books?! In Denmark, a very advanced country, the first 'libraries without books' have been opened. Most of them still contain some stock of books, however, the traditional book is no longer the focus. Libraries have become community places, places for social interaction, meetings, play, and personal education.
- » Leapfrogging?! Tanzania has accomplished it before. It is not necessary to repeat all the stages of development as has been done in the history of industrial countries. A very good example of this is mobile technology. Tanzania never developed a dense network of landlines. It, instead, 'jumped' directly to mobile phones. Is there a way of leapfrogging when it comes to the topic of libraries, access to knowledge, and building a knowledgeable society?
- » How could sustainable resources (e.g. mud) be used in such a way that the stereotypes against these materials are reduced, while at the same time not result in a perceived lower standard of the building, which might in effect discourage people from visiting it or even lead to a non-acceptance of it?
- » Sustainability?! Sustainability is a multi-faceted theme. For example, it is debatable if a very ecological design (e.g. using very sustainable building materials, or based on the cradle to

cradle principle etc.) is really sustainable if the building fails regarding its acceptance or its proper use.

» How could the site-specific challenges, such as the distance to the city or the lack of water and electricity, be addressed?

» How can a 'community library' contribute to the planned Nka Arts Village?

We don't want this report to be seen as providing an answer to the question of what the ideal library for Singida should look like – an attempt it inevitably would fail at anyways. Rather, we hope that this report could serve as a starting point for those planning to design a library for Singida to gain a first overview of some aspects which are particularly important, of context and challenges, and maybe even to give some first ideas of how to address some of these challenges. For those who work on other types of buildings or in other localities, we hope that it still might prove useful as one example of a methodological approach and as a fundus of ideas.

All the best to those who plan on participating in the Rural Community Library Competition, we are looking forward to see the final result and would be more than happy if we were able to contribute a little towards designing a well-received community library in Singida.

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Image 93: f.l.t.r.: H. Guo, C. Zacher, F. Estomih, M. Kaltenbach, E. Cuntz, T. Kaltenbach, M. Schäffges, I. Lenz, V. Contreras, M. Kamlah, S. Pfeil, J. Wachinger, P. Bisake, H. Lucian, M. Faustine, E. Frank, M. Mathias.

