



BUILDING TOWARDS COMMUNITY

PREFACE

Before revealing the aim and goals of my research I would like to familiarize the reader with my personal history and inspirations towards the subject, explaining the motives behind this work, and its theoretical aims that evolved from its early stages.

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The first months during my first visit in the rural outskirts of Kenya made me a different man. The people I met there were living from day to day, not worried about next week. When compared with me, people from the rural village that I worked and lived with led lives relatively without worry. During the last week of my stay I visited the slums of Nairobi and was shocked by what I saw. People prepared to die for a better life, the life and opportunities that I had. Most of the inhabitants come from all the far out corners of Kenya, and used to be farmers. I started to wonder if these people think that they improved their situation. What made them decide to leave their friends, family and general security behind? The strongest motive would most likely be economical. That's why I decided to aim future developments in rural areas on improving small economy, education and healthcare.

In 2007 this resulted in a design of a multifunctional village center in Tornu (figure 1), which is a tiny rural village on the border with Togo. Together with the inhabitants we built this small center to provide them small practical workshops. But when it was realized it proved that as a designer I failed. I had failed to look at the existing local small economy and on the village archetype. I felt that I was acting exactly as what I abhor.

"The big mistake lays in the fact that the architect sees the architecture as his objective and not the living human. The living human is for him nothing else then spoiling the fun, because he doesn't barrow himself as a static manipulative element, as a lifeless construction material, because it is not satisfied with the position the architect gives him but wants to realize his own originality"¹

the western region of Kenya. The aim was to help the farm owners to improve public healthcare and education for the people that live in the region of their farm. Although the owners have the best intentions, they are disregarding the social and cultural background of the inhabitants. Not out of ignorance, but because of the priority that lies in the improvement of health and habitation quality. The aim of the research is to formulate a method on how to make an inventory on positive and negative values in the current habitation. The result of the research will be a strategy on how to integrate these values in the physical intervention that will be made. The

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final objective is to come with a document that not only all the involved parties of the project on Mount Elgon can use but also create other rural developers throughout the world.



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Most of the development aid starts with the best intentions and most often gets stuck because of the most basic mistakes. In many cases because of disregarding social and historical aspects of the context, this has a lot to do with who, where and how the development is being done. Most of the time the development comes from somebody outside the community. But how do they know what is good or bad and what needs to be changed? These are a few of the many factors that should be taken into consideration when somebody develops. The two main factors of the research are inhabitants and dwellings and the body of knowledge will focus on all the themes that are a part or relate to these two factors.

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From working with the developers of Mount Elgon I gained insight on their “western” aim and perspective for the inhabitants. At the moment they are responsible for the realization of 120 new houses and with it the resettlement of 120 households, and the realization of public health facilities and schools. Although they are doing a great amount of work, in my point of view they ignore a large part of the cultural background of the future inhabitants. That is the reason why in the first part of the research a critique towards the way the developers operate will be formulated. Primarily it will describe their perspective on why, where and how they want to “develop” the area (diagram 1). As a conclusion I will describe the overall positive and negative issues the developers address on the current living situation.

“Dwelling, is a process as well as an artefact. It is both the process of living at a location and the physical expression of doing so. The dwelling place is more than the structure, as the soul is more than the body that contains it. For untold millions of people the bond between themselves and their dwelling place transcends the physical limitations of their habitation. This double significance of dwelling, which has been rather elusive to many, encompasses the manifold cultural and material aspects of domestic living”²

Part II of the research shows the method on how we make an approach to the inventory of the social, cultural and historical values (diagram 2). The analysis of these values is performed by field study through interviews, observations and games that do not only reveal the social context, but also shows what the hopes and wishes of the inhabitants are. It's their future and the inhabitants should make decisions for the benefit of their community themselves. In the conclusion I will describe the overall positive and negative issues the inhabitants address to their current living situation.

“The model itself is the result of the collaboration of many people over many generations as well as the collaboration between makers and users of buildings and other artefacts which is what is meant by the term traditional. Since knowledge of the model is shared by all, there is no need for drawings or designers.”³

Part III of the research will focus on the comparison of part I&II of the research. The primary focus of the research is to communicate between the developers and inhabitants. In this last part I want to communicate the contradictions and similarities between both groups and give a possible scenario that they can solve the contradictions and use the similarities. In current projects we can see that the developers wants to solve certain issues by prohibiting certain customs or events. In cultural perspective this not the approach to solve problems, rather it is merely a provocation towards culture. As an addition I will add as much of the issues of the research topics that neither have been mentioned by the developers nor the inhabitants, but should be included in a possible solution.

Main problem statement on which the research is based on is a critique towards the current way of work of Habitat for Humanity Kenya and the farm owners. It will be described in the first part of the research that deals with the developers' perspective based on the current development they are performing in the area.

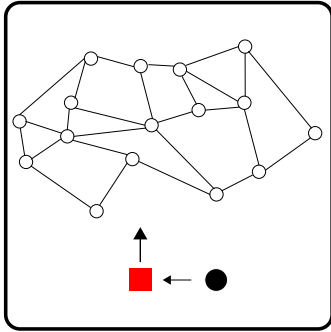


DIAGRAM I

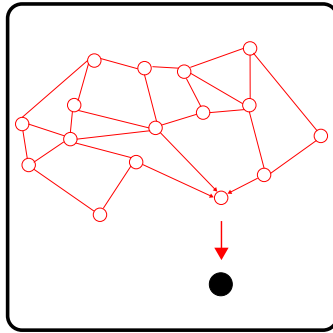


DIAGRAM II

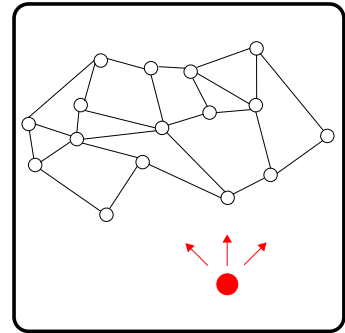


DIAGRAM III

DIAGRAM I

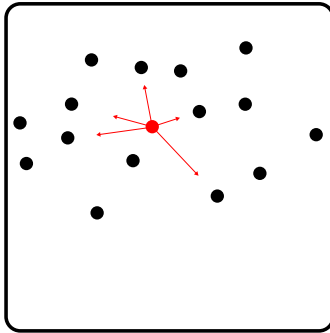
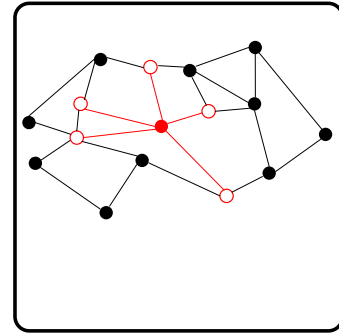


DIAGRAM II



The aim of the research is not only to act as a communicator between the developers of Mount Elgon but perhaps also for other developers. The research shows how to perceive and make an inventory of the cultural and historical context of the development area, and how to grasp the hopes and wishes of the future inhabitants for their projects. For this data collection (inventory) different methods and strategies will be used for the implementation of as much as is needed of the cultural, historical values into physical form.

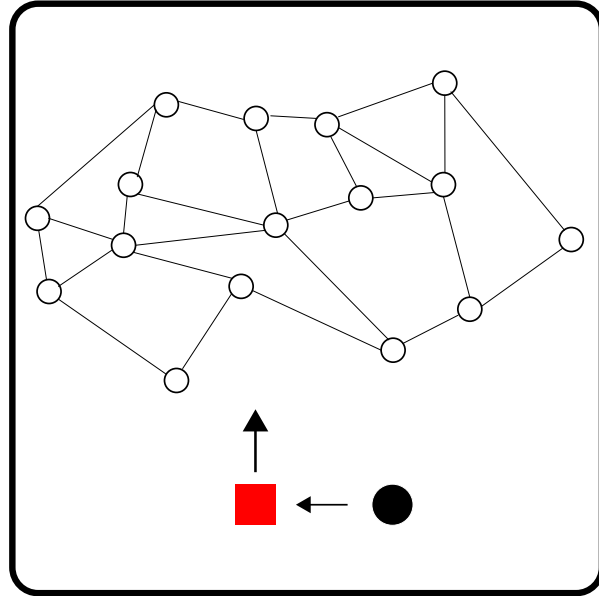
"The new village with its main goal to improve the living quality of the future inhabitants can only be established when the improvement is carried by the cultural understanding and current living structure of the different living groups."⁴

Eventually I want to formulate a scenario for the next habitation phase of the farm which will reposition 180 households. We could say that every community has a natural way of growth, and is being established by external (diagram I) and internal (diagram II) forces. From a humanistic approach we could say that external factors create cultural fragmentation because growth is not established by the community itself and gives unequal opportunities. It will not be valued as much as internal growth factors, mainly because these internal factors are a result of the community itself. This research will focus on increasing internal community values and, more importantly, decreasing the value and importance of external factors. Through Parts I, II and III, I will distillate positive and negative values of the internal and external factors that will be enhanced or reduced in terms of asset to the community.

The weight of the different values will create a hierarchy that will formulate the most important subjects that should be dealt with to offer a proper solution. How to formulate these values into physical form will outline the first step towards the designing phase.

DEVELOPERS PERSPECTIVE

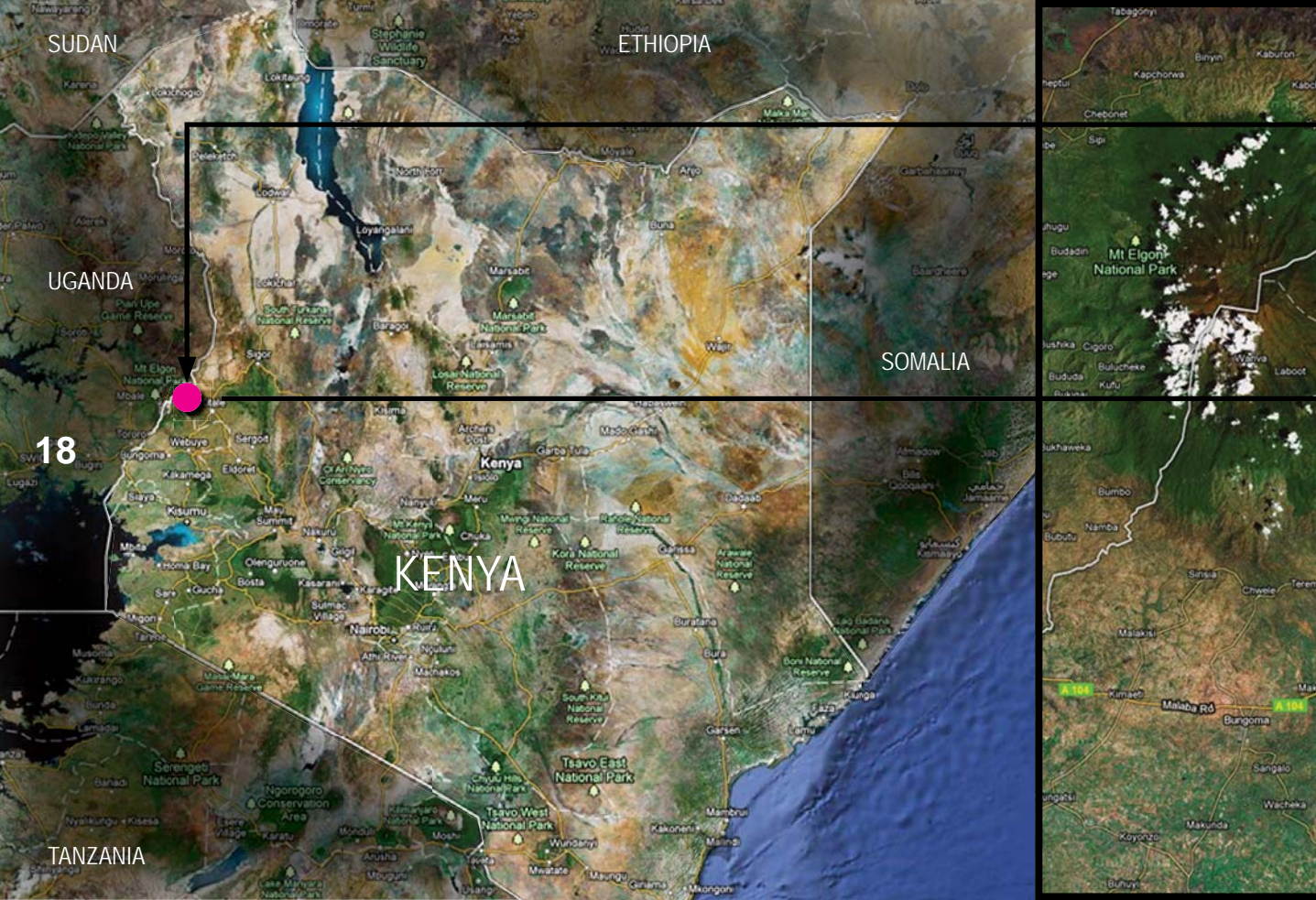
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INTRODUCTION

From working with the developers of Mount Elgon I gained insight on their “western” aim and perspective for the inhabitants. At the moment they are responsible for the realization of 110 new houses and with it the resettlement of 110 households, and the realization of public health facilities and schools. Although they are doing a great amount of work, in my point of view they ignore or on purpose obstructing the cultural background of the inhabitants. That is the reason why in the first part of the research a critique towards the way they operate will be formulated. Primarily it will describe their perspective on why, where and how they want to “develop” the area (diagram 1). As a conclusion for this Part I some of the main consequences that will most probably happen if they ignore the cultural context of the area will be formulated, next to the overall positive and negative values they put into the development projects.



SUDAN

ETHIOPIA

UGANDA

SOMALIA

18

KENYA

TANZANIA

Mt Elgon National Park

Kenya

Tsavo East National Park

Tsavo West National Park

A104

A104

Malaba Rd



WHAT,WHERE&WHO? THE FARM, MOUNT ELGON ORCHARDS

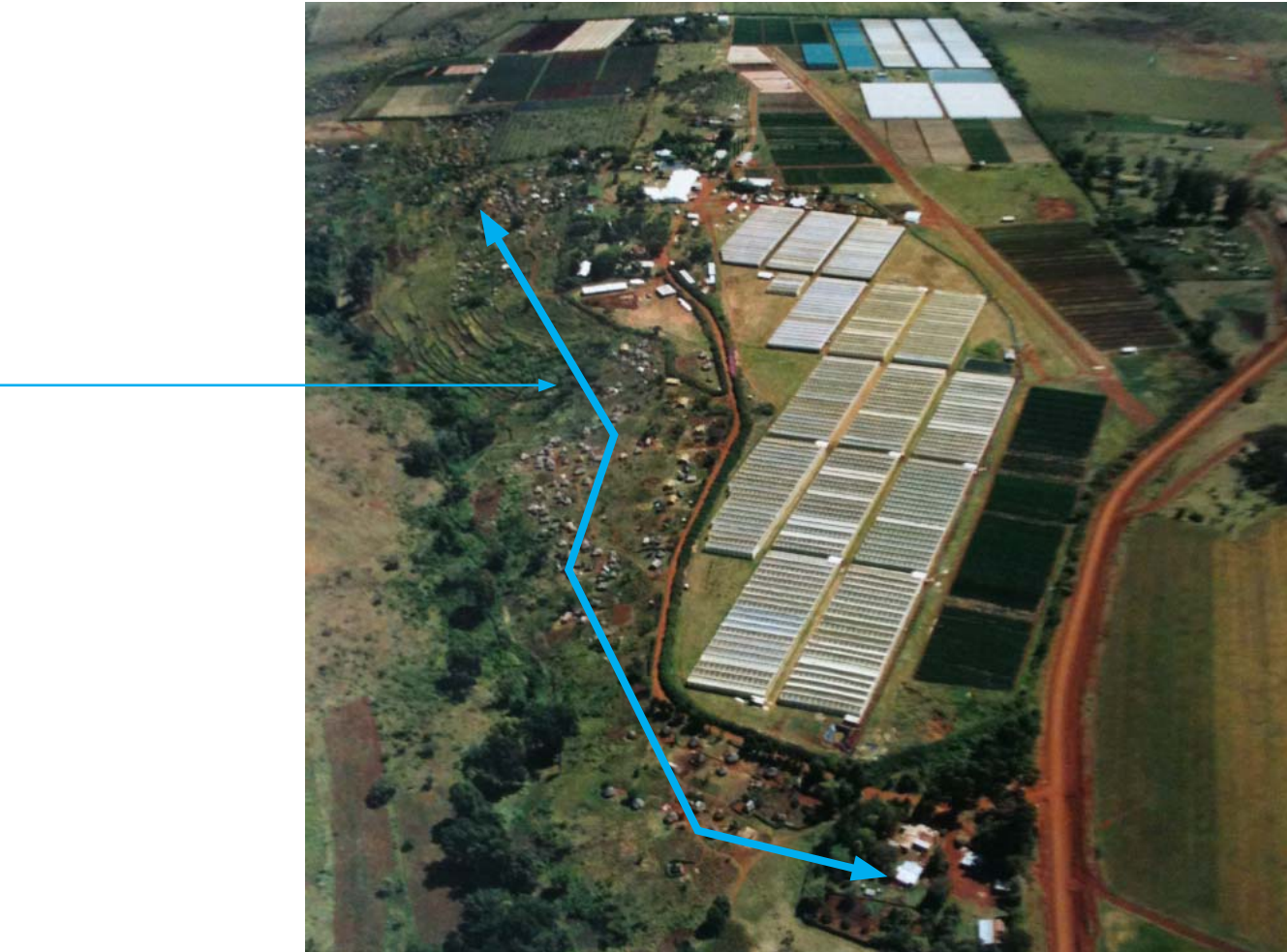
The farm is located on the northern slopes of Mount Elgon in the western part of Kenya, and was established in 1922 by R. Andersen from Sweden. Over the years the farm has grown many different crops such as coffee, maize, avocados, apples and peaches. The farm has always had fruit trees and rose plant nurseries. The farm moved into commercial floriculture in 1993 and by 1997 the fruit production was phased out. The farm today employs close to a thousand permanent employees and is concentrating on roses for the export market better known as "The Elgon Collection". Current average daily production lays around the 180.000 roses which are sold in The Netherlands.

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Area	_____	1200 acres (approx. 500 hectares)
Altitude	_____	6400 feet. (2000 meters)
Soil	_____	A fertile volcanic clay/loam
Water source	_____	The farm borders the River Suam and the River Kaptega (permanent rivers)
Rainfall	_____	Average 40 inches (1040 mm) per year, with 50% falling during the main rain season July to September
Temperature	_____	Average day: 24 C. Average night: 12 C.

PROJECT DESCRIPTION

In the first 20 years after the start of the farm (1922) workers were hard to find and often the owner had to search for workers with a trailer hundreds of kilometres away. Because a lot of workers came from far the farmer allowed them to build a temporary dwelling (including their families) on the farm ground. Over the last century people have settled themselves along the perimeter of the farm in search of a better future. A rough estimation places 5500 people on an area of 9 hectares and the population is still growing. Living conditions are deteriorating and the density is exponentially growing. There is no control on who starts establishes themselves in the perimeter of the farm and because of the lack of regulation there are hundreds of people who live on the farm but don't even work for the company. Because there is no registration or documentation about the inhabitants of the camps, the owner decided to move all the workers of the farm to a new location. The aim is to put a hold on the incoming flow and to improve the general living conditions of the workers. The question that arises is what is being done with the people that don't work for the farm. The owners pointed out a location on the far end of the farm where these people are relocated. The main motive for these people to start living in the camps is because of the economic opportunities, healthcare and education. A lot of these people come from Uganda, a country that in general has poor living conditions, especially in the border districts.



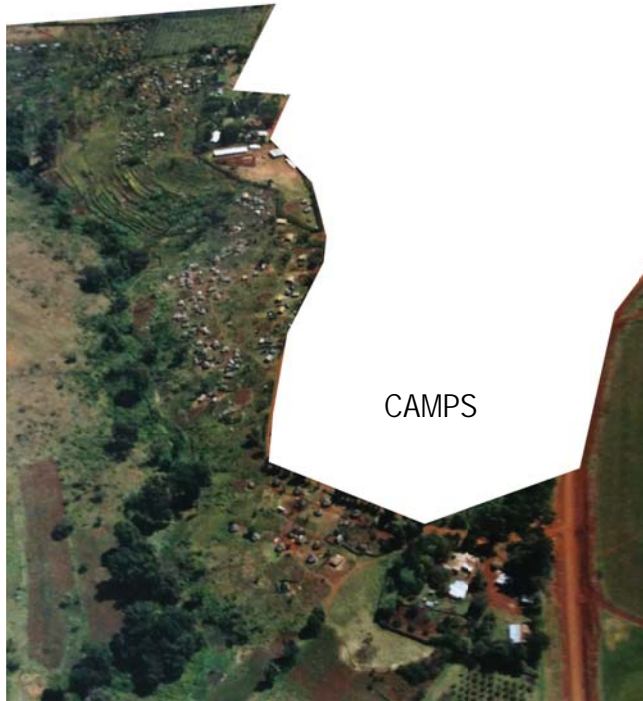
LOCATION

Mount Elgon is located in the western region of Kenya and its western border connects with Uganda. The region has been a victim over the last years because of violent tribe clashes. Main reasons are the post-election disturbances in 2008 and the violent Pokot tribe that plundered the region for decades. Because of poor infrastructure and poor general planning, the region is still largely undeveloped. The production of the roses of "the Elgon Collection" is situated on the northern slopes of Mount Elgon, next to Mount Elgon National Park, bordering Uganda, 40 km north west of Kitale town and 350 km north west of Nairobi, the capital of Kenya. The farm is the largest employer of the region and keeps on expanding his workforce.

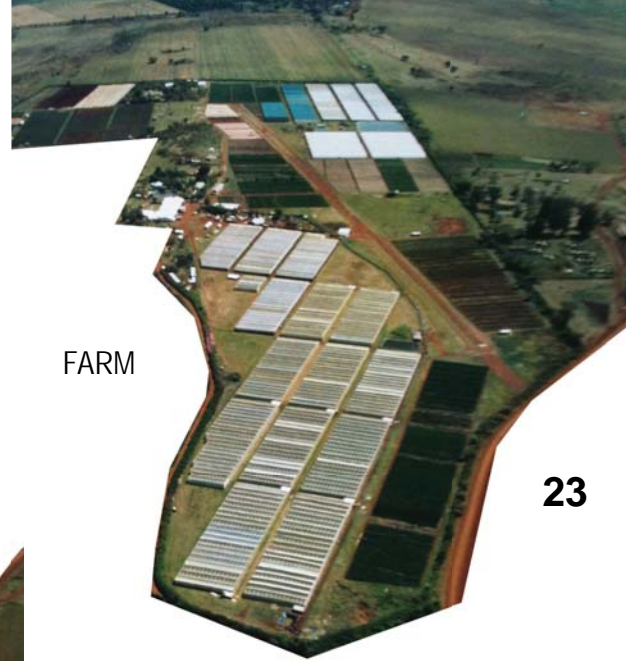
The first phase of the farm to improve living conditions outlines the provision of healthcare and educational facilities. I have been involved in these project for two years as a volunteer. The second phase outlines the development of a new living district of 120 houses. Over the upcoming years the owners are planning to build more housing districts and eventually to house all the workers of the farm. When workers buy a house, their current house inside the camp is destroyed. Eventually, once everyone is relocated the people that don't work on the farm will be placed in the current Lokobo I camp. In this far corner of the farm the people will get ownership over 4,5 hectares of land and will be left on their own. Besides the relocation the inhabitants of the camp are not allowed to make any repairs or additional structures to their households. I feel the need to underline the deteriorating conditions of the houses and poor living conditions as a direct cause.

This research will focus on the first phase of creating 120 households, as well as how Habitat for Humanity and the farm owners are dealing with the relocation. With that I'm trying to explain all the problems that have arisen thus far in the eyes of the developer. Habitat for Humanity is responsible for the realization of the project, which means that they are building the 120 houses with the aid of the local community, and the farm is acting only as a financier and regulator during the construction period. The research intends to advise The Mount Elgon

Trust and Habitat for Humanity and to make them sensitive towards social cultural background of the inhabitants. From the analysis of the cultural background and the inventory of the thoughts and hopes of the inhabitants I would like to establish a bridge between the cultural roots of these tribes



CAMPS



FARM

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and the desires that they have to developed themselves. Ultimately I hope to achieve this by formulating a list of spatial factors that are based customs, traditions and the future perspective of the inhabitants of the camps of the farm. As a result presenting an improved new possible for a new village for the workers of Mount Elgon orchards.



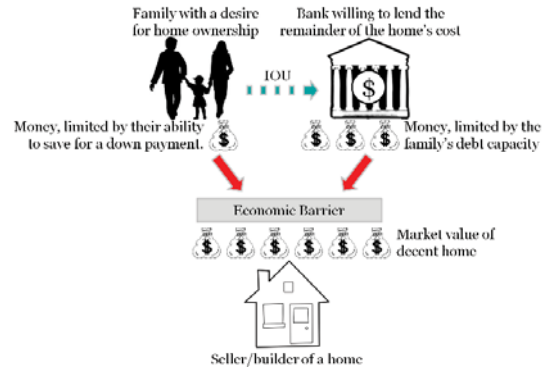
HABITAT FOR HUMANITY KENYA

"Habitat for Humanity® Kenya (HFH Kenya) is a non-profit, non-governmental Christian housing organization dedicated to the elimination of poverty housing. HFH Kenya has been working in Kenya since 1982 and has since then helped over 4500 families organized in over 100 community groups to construct simple, decent and affordable houses through provision of the loan capital needed for housing construction"¹. It is important to understand that the role of Habitat is not restricted to providing capital only. They present themselves as local experts that provides the community with a house that is derived from their own archetype. From these values they formulate an easy to build dwelling for the lowest possible price. Their main tasks are to provide the community with materials and coordinate the construction site. Their concept is to let the local community provide with unskilled labour in order to lower the final dwelling price. As a side effect this will create the identity of a community and will establish pride and periodical maintenance.

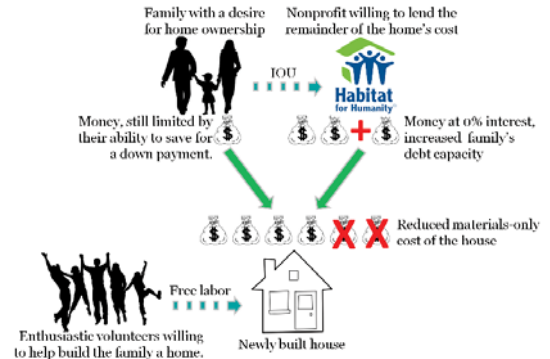
1 Habitat for humanity Kenya mission statement, <http://www.hfhkenya.or.ke/>

"The ultimate goal of Habitat for Humanity® is to eliminate poverty housing and homelessness from the face of the earth by building adequate and basic housing. Furthermore, all our words and actions are for the ultimate purpose of putting shelter on the hearts and mind of people in such a powerful way that poverty housing and homelessness become socially, politically and religiously unacceptable in our nations and world."²

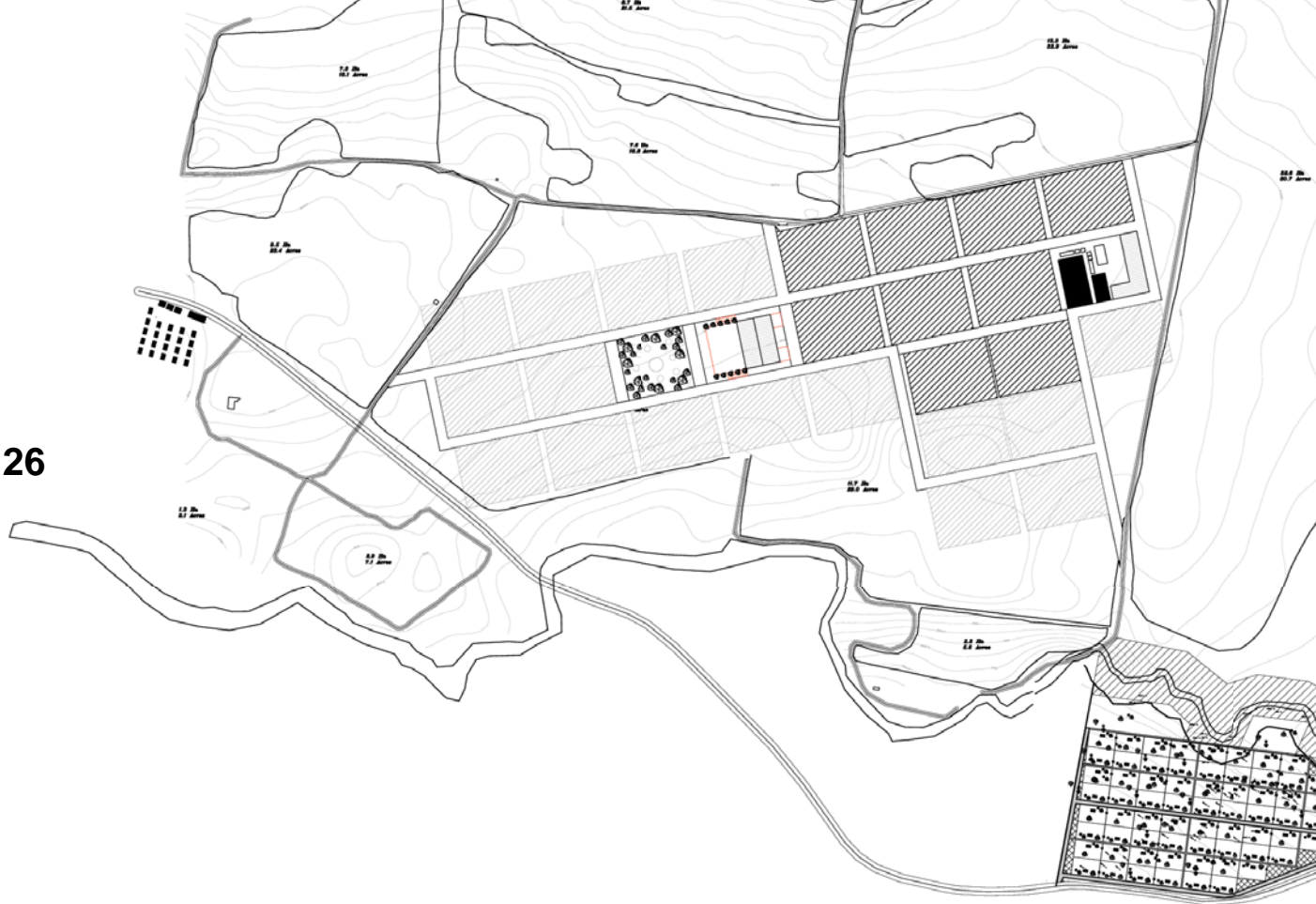
Two years after the post-election violence that rocked Kenya in 2007/2008 (in the region of the farm), internally displaced persons (IDPs) are still living in deplorable conditions, their tents now tattered and torn and leaking heavily during the rain. For the Mount Elgon Foundation, Habitat for Humanity® Kenya is responsible for the coordination of the construction of 120 houses over a period of 2 years. As the mission statement of the company requires, the houses must be built together with the local community that surrounds the farm. A coordinator within the camps is responsible for recording that people want to buy a house as well as their complicity to the development of their new communities. Ultimately the community should be able to build the house themselves.



25



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27



niveau 0

50 100 150 200 250

28



PROBLEM STATEMENT

Mount Elgon Flower Orchards Ltd is a company that grew from fifty employees to almost a thousand at the moment. When the first people came working on the farm they immediately started to create temporary structures to live in during the workweek. After a few decades, people started to settle permanently around the farm. Because of the lack of regulations these “housing camps” started to grow out as slums. In 1982 the owner (father of the current owner) started offering houses to farm workers. Main target of the farmer was to improve living quality and public health. When the current owner started to work on the farm the conditions of these new houses were already deteriorated. First step to improve the life quality the public healthcare needed to be improved to do so his wife started a trust to build general healthcare and education for the workers of the farm.

The poor living conditions in the camps remained, mainly because of the lack of regulations, planning and poor quality of the dwellings. Most of these structures are temporal and don't last longer than one generation.

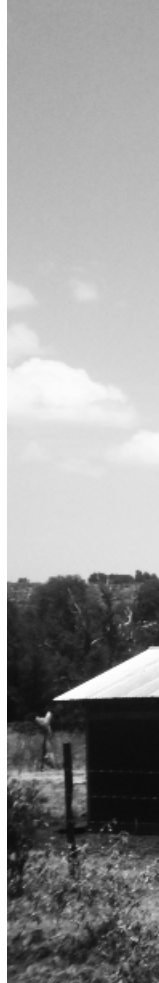
“Generally, however, buildings in such cultures are fairly short lived, and are often deserted or destroyed when the owner dies. This temporal relation of owner to house is a complex problem. The house may be temporary and replaced many times during the owner's lifetime; it may be destroyed at the death of the owner; it may be left vacant to fall into ruin, or it may be passed on to his children; it may be moved to a new site or rebuilt on the same site. The variations are endless, and attitudes toward the time dimension of the house will affect attitudes toward the problem of weathering.”³

Over the years the families grew and temporary extensions were built. Normally in a village this kind of expansion is guided by cultural regulations. Now these people are living together in a new context without the culture supporting a “natural” way of structuring development inside the camps. When walking through the camps the first thing to notice is the density. When compared to local villages the houses are packed closer together. Because of the limited amount of space, the extension structures are extremely close to the main family houses. The second issue is sanitation, the overwhelming smell hits you immediately when passing by the sanitation structures of the “camp”. Normally during the night people urinate opposite the back of the house. Because of the density of the camp the sewage is everywhere. Sanitation blocks were built but these habits didn’t stop. Because people don’t own the toilets themselves they don’t bother cleaning it after they use them.

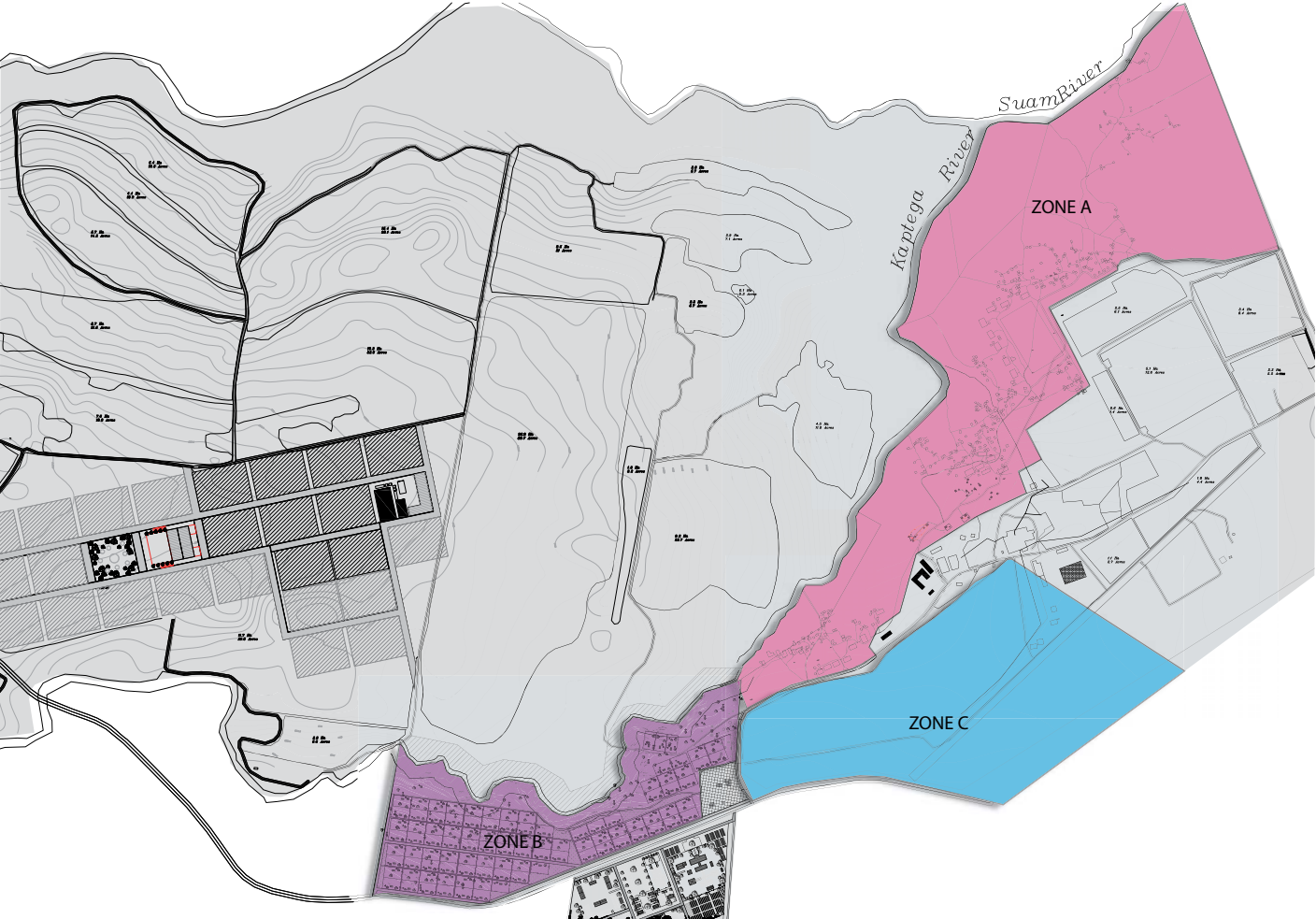
The initiative to improve the living conditions of the workers comes from the owner. What remains unclear is what the people think and want. Improvement comes when the people decide themselves that some things need to change. It’s also very likely that they already have an idea or opinion of how they would like to organize this new “camp”.

Currently, the main problem is that Habitat for Humanity is not including the people in the development of the new camp. The risk that might occur is that the inhabitants will not organize and built their community themselves . The deregulation of the inhabitants will further deteriorate and possibly more problems will occur. “I submit that in our search for an appropriate architecture for the region, we have ignored the architecture of the region.”⁴

To prevent the construction of communities that lack culture and social coherence, I want to show the developers (the farm owner and Habitat for Humanity) the importance of certain by them forgotten or ignored habits, customs, wishes, etc. in an effort to retain as many cultural background in the future development as possible. The aim is to form a strategy for the community and developer on how to start the dialogue together and also how this can be translated into spatial design.







Suam River

Kaptaga River

ZONE A

ZONE C

ZONE B

RESEARCH OBJECTIVE

The current trend in the camp is that the owners of the farm decide how their workers live and work. The initiative for change comes from the owner and the question remains what the people think and want. First two parts of the research show all the aspects around habitation from developer and inhabitant point of view and how many of these aspects are forgotten or obstructed by the developers. The third part explains how to deal with the friction points between developer and inhabitants and also how forgotten or obstructed aspects again can be part of the solution. In general this research doesn't want to talk for the involved groups nor does it want to pretend to tell them what and how to do. It only has the ambition to show involved groups and also other developers and their involved inhabitants how they can help each other. Most of the development aid comes from the best intentions and often only lacks communication and understanding. As a result I will formulate a master plan for a new camp which will include all scales of the project. Which basically means that I will write scenarios and possible solutions for the future camp. Which is shortly formulated in the following research goal:

RESEARCH GOAL

The research will show that a new village whose main goal is to improve the living quality of the future inhabitants can only be established when the improvements are sensitive to the culture and the current living structures of the different groups. This research primary goal is not to formulate a solution but to establish a first communication between developer and inhabitants.

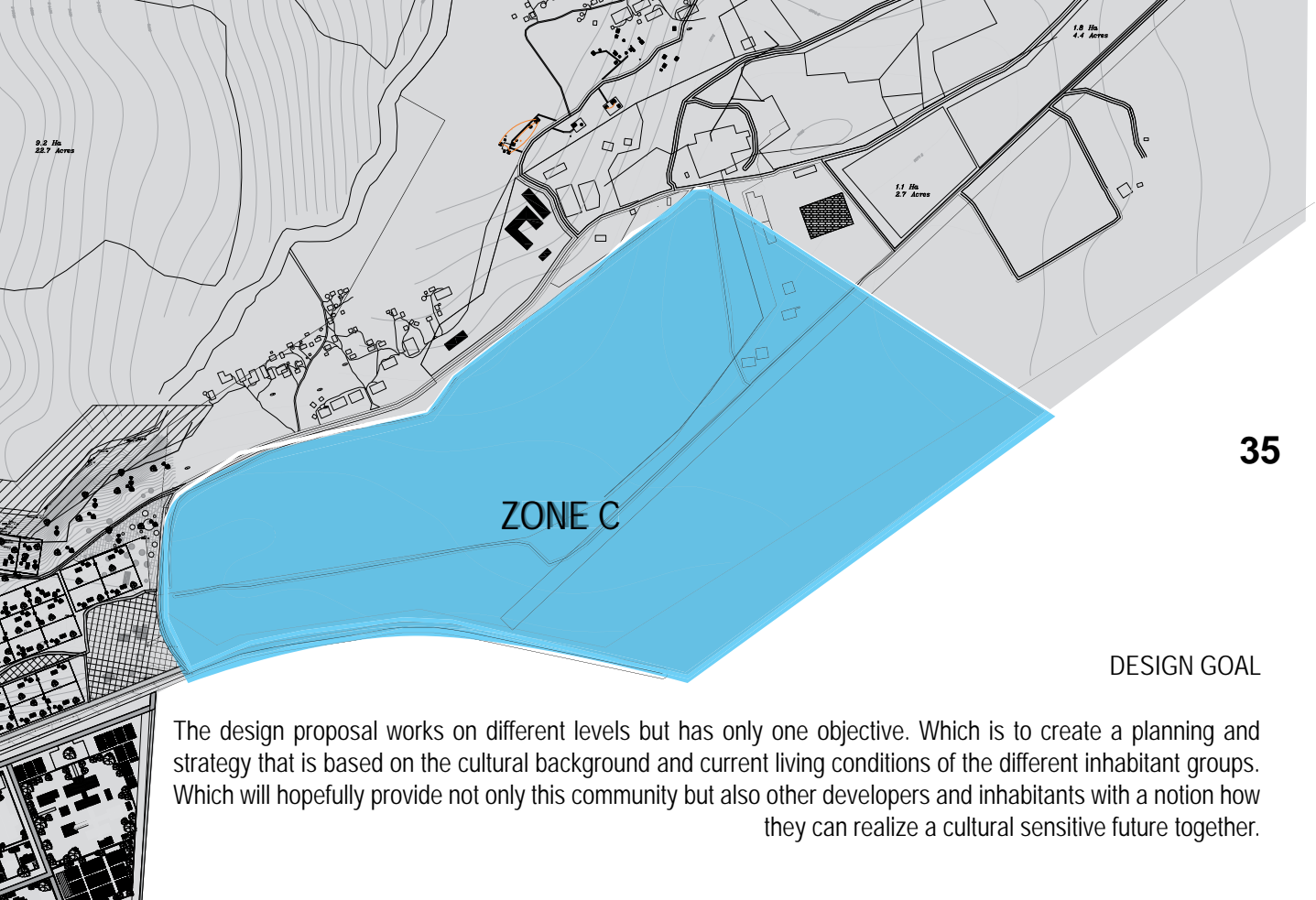


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29.0 Acres

2.3 Ha
5.6 Acres

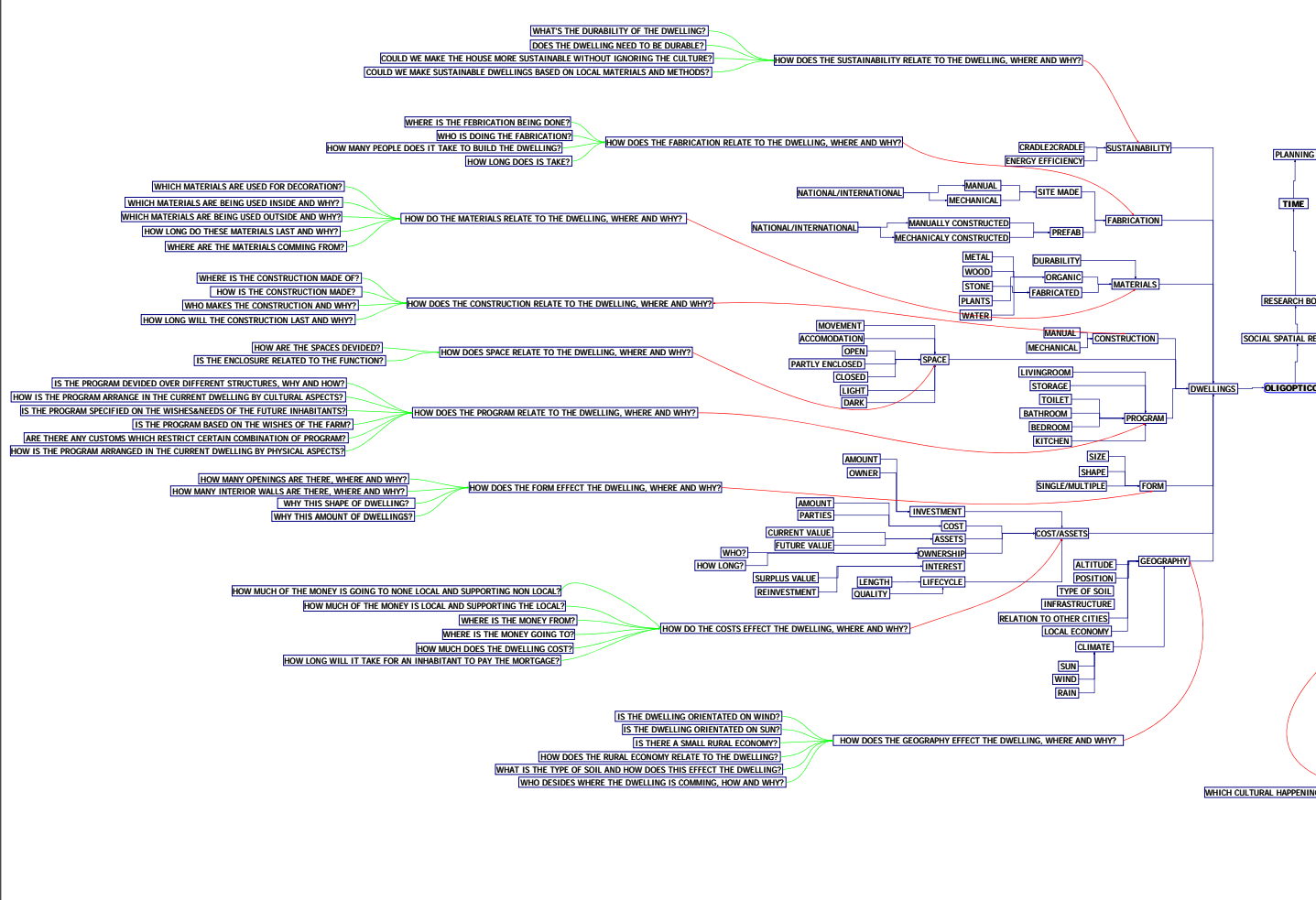
1.3 Ha
2.2 Acres

ZONE

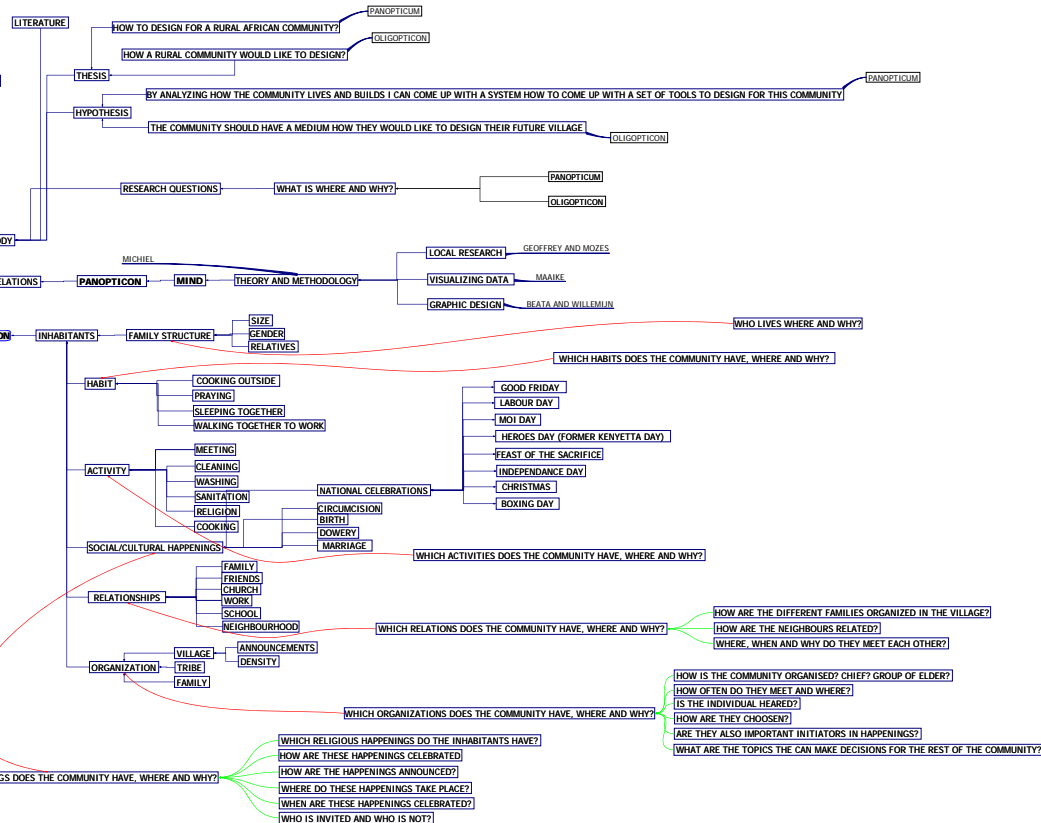


DESIGN GOAL

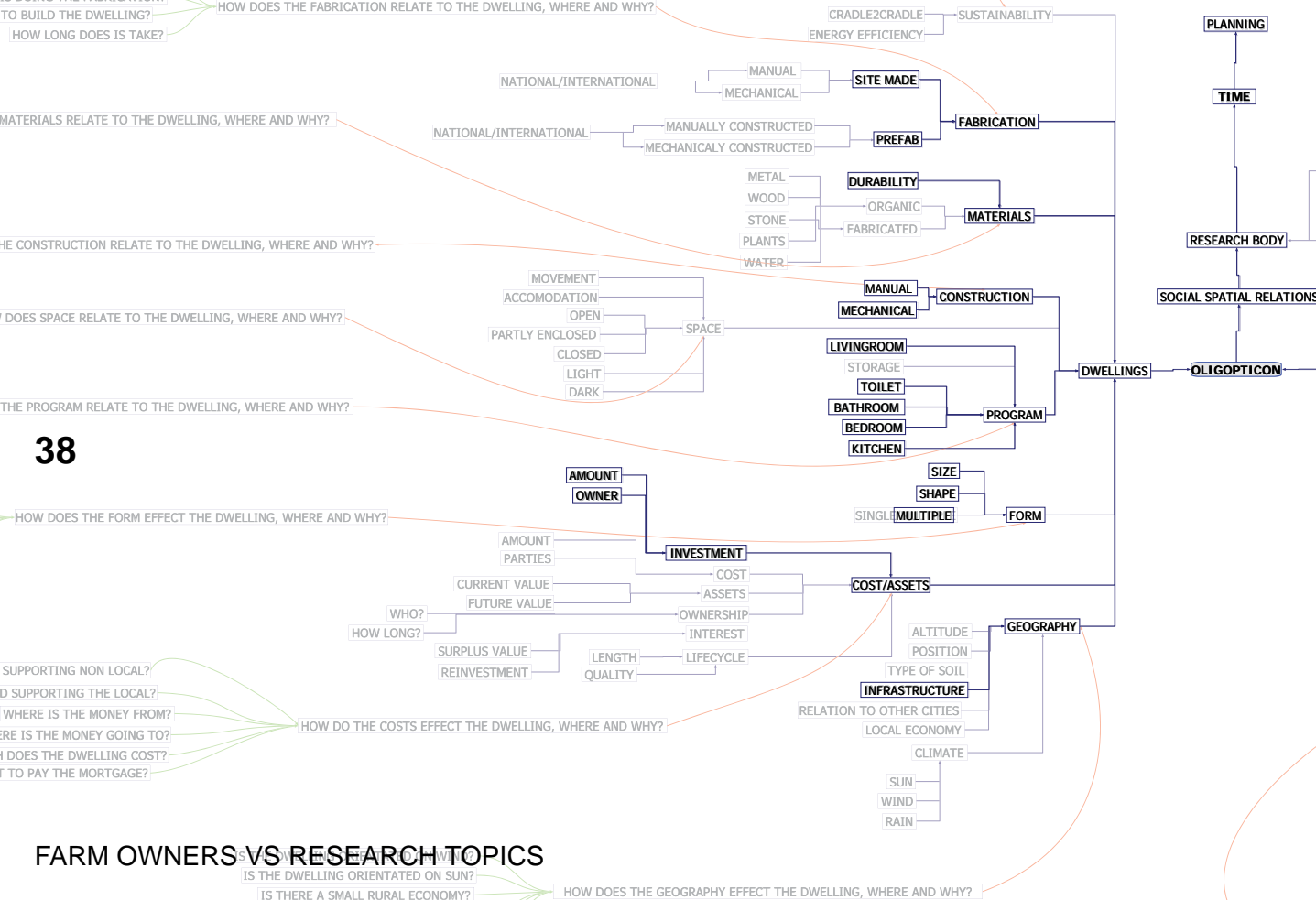
The design proposal works on different levels but has only one objective. Which is to create a planning and strategy that is based on the cultural background and current living conditions of the different inhabitant groups. Which will hopefully provide not only this community but also other developers and inhabitants with a notion how they can realize a cultural sensitive future together.

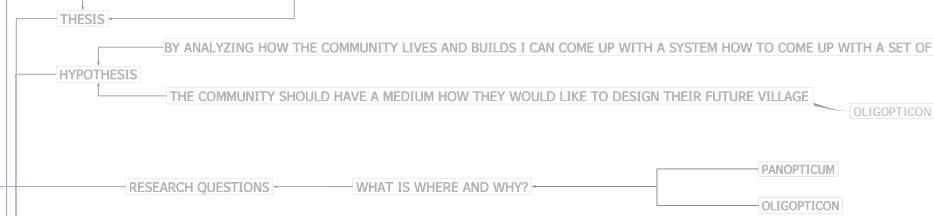


THE RESEARCH TOPICS



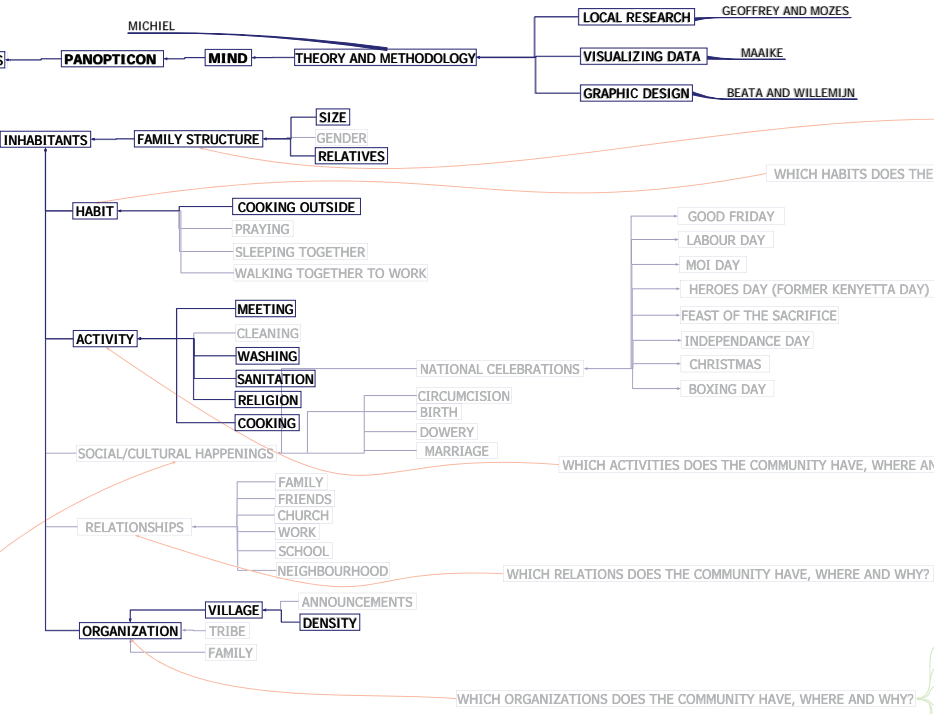
The diagram on the left shows a full overview of all the themes and issues related to the two main research subjects which are dwelling and inhabitant. Although the developers and inhabitants didn't talk about all the related subjects that doesn't mean that they lack importance nor to be left out from the research. Every part of the research discusses different parts of the total research topics but eventually will cover almost all the subthemes, factors, questions and sub questions. The different parts will be shown along with this diagram and an explanation of what will be discussed in that particular part.



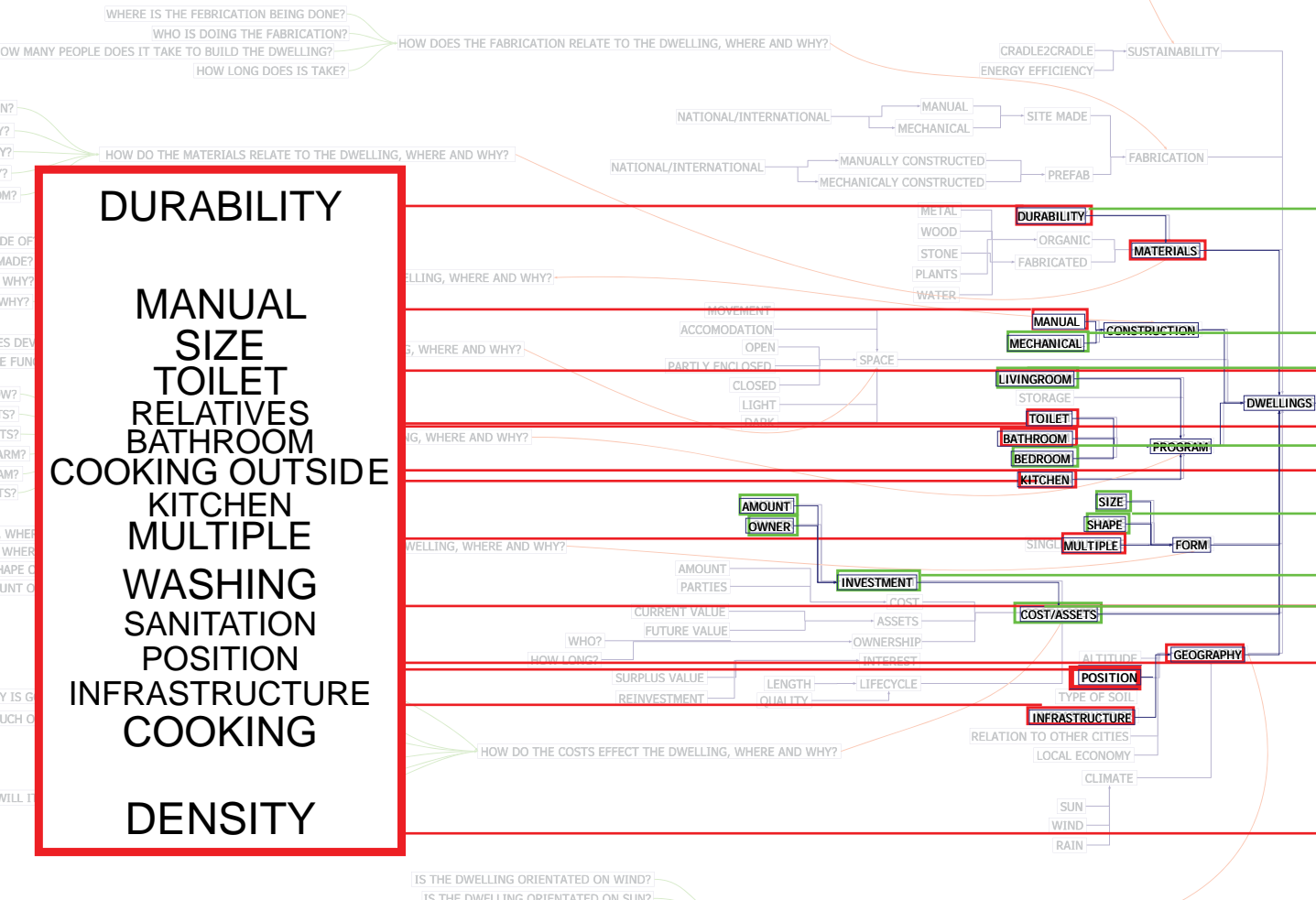


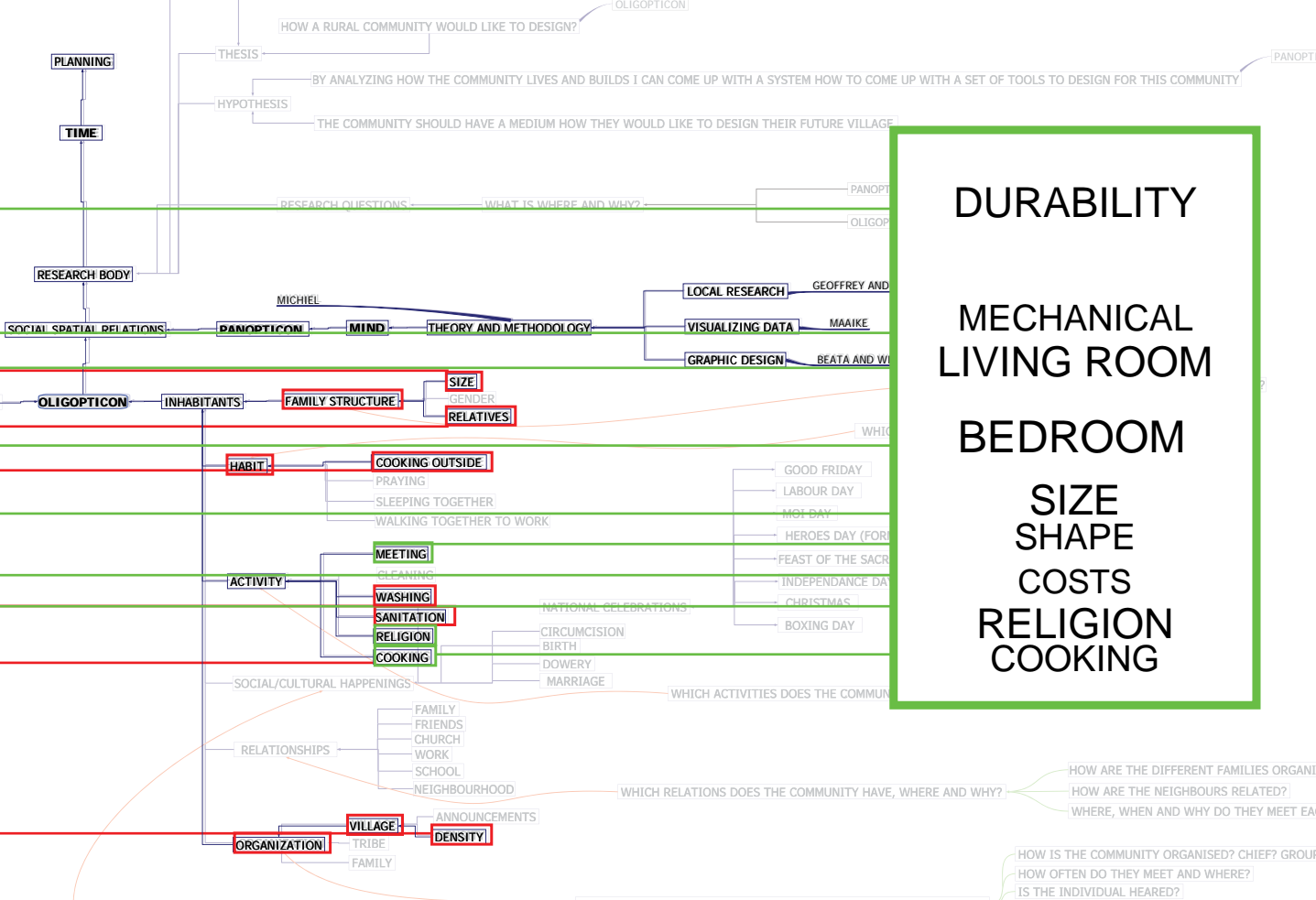
SOCIETAL AND SCIENTIFIC RELEVANCE

One of the major critiques towards development aid is that the developer takes the initiative to develop. The action is taken by comparing their own conditions to the conditions in the area they are working on. This means that most of the organizations offer a solution that suits the problem statement they formulated. Although that general impoverished conditions can generally be observed some of them are the consequence of the cultural background of the community. So the problems formulated might be the cause of traditions and customs which can't be simply stopped by physical development.



DURABILITY
MANUAL
SIZE
TOILET
RELATIVES
BATHROOM
COOKING OUTSIDE
KITCHEN
MULTIPLE
WASHING
SANITATION
POSITION
INFRASTRUCTURE
COOKING
DENSITY





It is the community that needs to decide that certain custom or traditions need to change to improve general living conditions and to evolve as a society.

“Professionals in the built environment have been more concerned with the physical environment, which seems easier to grasp, and have ended up ignoring the social which involves knowing the culture of the people they design for. There is urgent need for architects and planners to be aware, as much as is possible, of the complexities of social structures and value systems that tie the bonds between mankind and his buildings”⁵

Often the developer notices problems that the community itself doesn't see. The only way to make sure it really is a problem a dialogue between the developer and the community has to be established. Not only to define the problem proper but also to leave the decision making with the community. In this case the developer will understand the causes of the problems better and will also understand where, how and who needs to be helped. This research only tries to expose the differences and similarities between developer and community perspectives and how these can be interpreted to develop with the two sides combined .

“It is unfortunate that no discipline exists for the study of vernacular architecture. Were it to emerge it would probably combine elements of both architecture and anthropology. This dual character has possibly accounted for the limited number of comparative research studies in the field, for anthropological enquiry is not a tradition in architectural training, and an understanding of architectural principles has never been viewed as an important aspect of the training in anthropology. The lack of a common language means that there are very few cases where interdisciplinary teams study specific dwellings and settlements to bring their various skills to bear upon the subject, leading to a unified collective study”⁶

5 Oliver, P. and Hayward, R. Architecture: An invitation. Basil Blackwell, 1990.

6 Oliver, P. Dwellings: The House Across The World. Phaidon, Oxford, 1987





The conclusion of this research tries to reach out to inhabitants and developers over the world to become an example how to develop together. To create a development that is sensitive towards social cultural factors and the different involved groups. That the research shows that dialogue and understanding are the basis for every development.

DWELLING TYPES

The owner of the farm wants to improve the living situation of the almost 1000 households that are working for him. The main reasons at this moment are density, poor building construction and sanitation. Over a period of 5 years they want to relocate all the households to new camps. The first phase of this transfer is being realized at this moment in Phase I (see diagram on next page). The proposed dwelling by Habitat for Humanity Kenya and the owners of the farm is shown on the right page. The currently build house by the inhabitants of the camps on the left page.





I put these two dwellings next to each other to show the differences that can be noticed in the archetype of the new development. Although the dwelling seems to be more durable than the current dwelling questions arise if the house suits the habitation preferences of the future inhabitants. Some of the issues that are neglected when we compare the habitat dwelling to the current used dwelling are: Materialization (local, radial heating, acoustics & identity) Orientation, Program, Position (on the plot and between different plots) & Costs.

PHASE I

PHASE III

PHASE IV

PHASE V

PHASE II



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S.S. 3th
G.G. Avenue

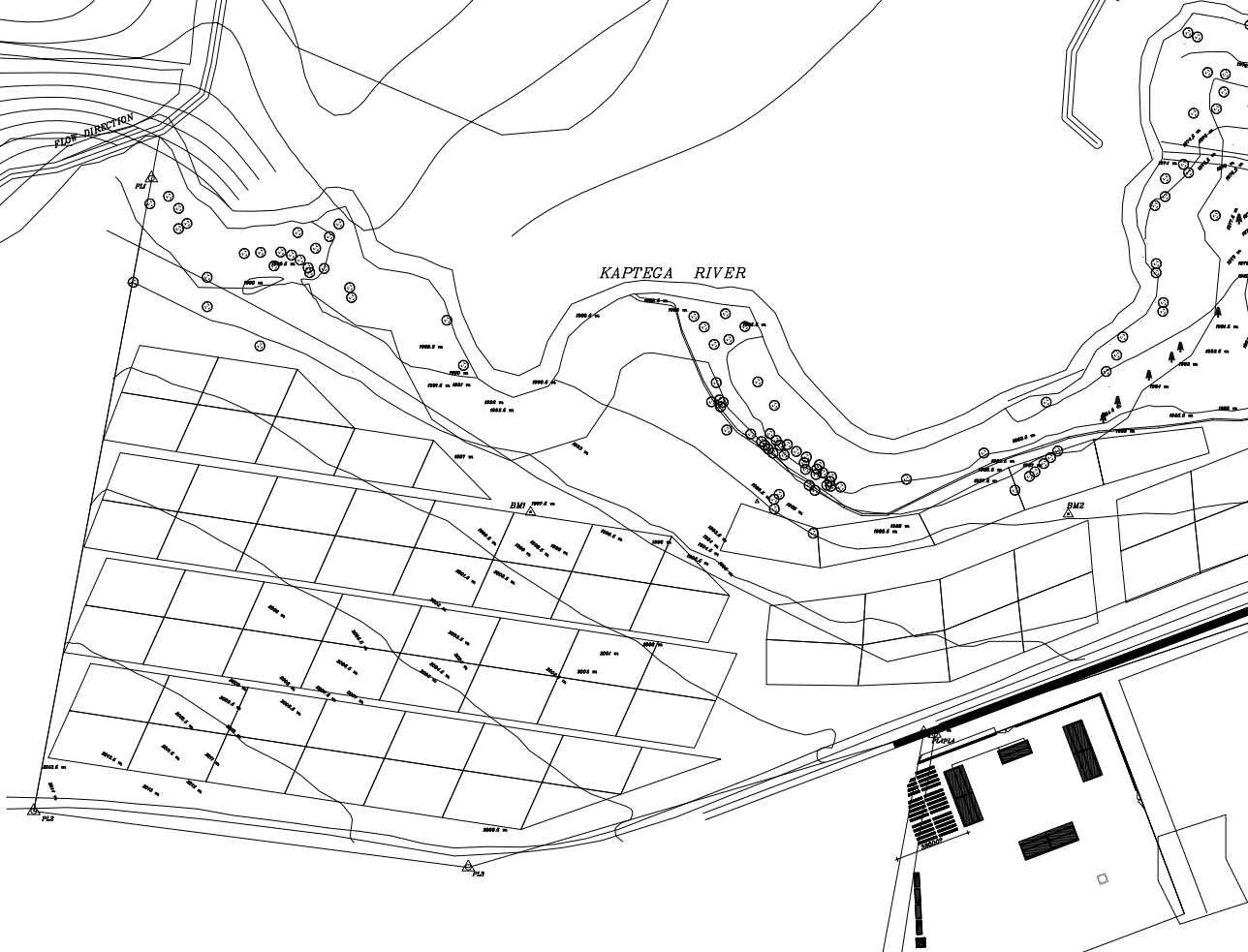
FUTURE DEVELOPMENT

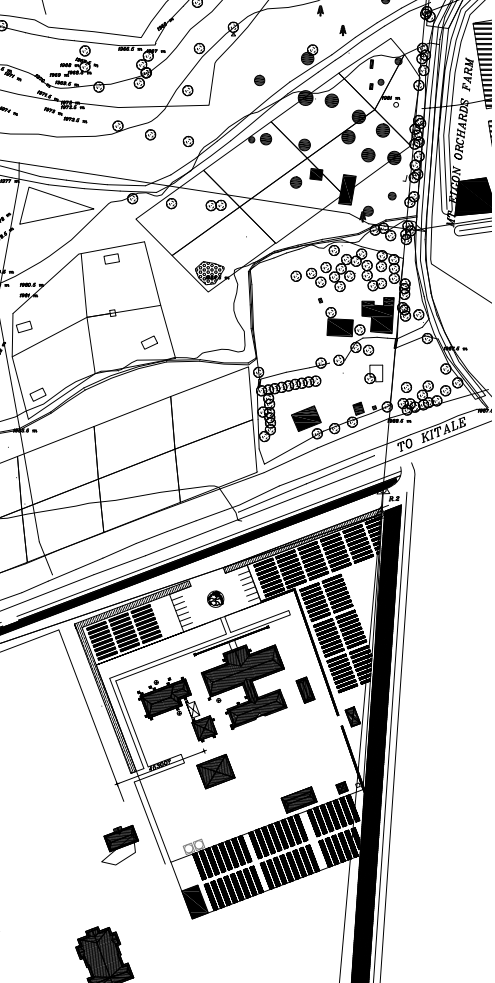
Over the years, new zones will need to be identified, bought and prepared for development. As the owners want to resettle all their employees to new habitation. A possible scenario for the owners is shown on the next page. What remains to be seen is when they continue the current way of development. Because at the moment of the 120 households that are built only 90 are meant to be inhabited by farm workers. The rest is sold to farmworkers of neighbouring government farms or private purchased by people from the region. Phase II is on company owned ground and seems in my perspective to be the most obvious choice for the next phase to be constructed. The other phases are government owned and will subsequently need more time to be developed. Because the project is already very popular in the region and the first meetings with local government already started this shouldn't be a problem. What should be noted in this case is the potential of the area. When we take a look on border towns in the western region vast expansions can be sited. The new development lays at the C45 from Kitale to Suam and is not only the first habitation in Kenya at this road to Uganda but it's also the first possibility to cross the border on the northern side of Mount Elgon. This fact combined with the large amount of people not working for the farm that try to apply for a dwelling tells us a lot about the potential of this area. One last important issue left for me to mention is the availability of public healthcare and schools that is the best in the region which already attracts many people from as well as Kenya as Uganda.

SELECTED WORKERS FOR HABITATION

For the first phase the workers that will have the first possibility to buy a house are already selected by the farm owner (shown on the image on the right page). This selection is performed based on the length that they have been working for the farm and the amount of money that they saved in the farm fund. Where in the past new members of a community would only be included by marriage or because they are related to families inside the community has now taken place by the rationality of money. We can only guess what the effects of the decision of the owners are for the community to set up this process of selection. But it is clear that traditional ways of organizing of the community is obstructed. As we can see in the current camps of the farm this lack of regulation causes urban sprawl and poor habitation. Everybody can add as many structures as they want and due to this fact a lot of inhabitants are renting their houses to other workers or anyone who is interested. This feeds the neglecting of dwellings and detaroriates the homogeneity of the community. Which is a point that should solved and not enhanced in the new habitation. The developer should take more effort to reinstated the internal organization of the communities and activate them to organize the selection of new inhabitants.

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HABITAT FOR HUMANITY MASTERPLAN

Habitat for Humanity Kenya made the plan shown on the left page which based on the drawing produced by Ramani It. The contract that was signed between DEG, Habitat for Humanity Kenya and the Mount Elgon trust there should be a plan for 120 households. The contract was based on the planning of full plots (1000m²) and half plots (500m²). The Mount Elgon trust decided to build only full plots because of the outcome of the interviews performed. Result is that only 105 houses can be built with a full plot. There was only a hand sketched drawing of the plan and in the eyes of the owner the plan lacked on several aspects. I would like to underline the fact that in the plan of Habitat the rational plan was formulated by the wishes of the owners of the farm and themselves. Which is a contradiction when we take a close look on the mission statement of Habitat for Humanity. The question remains if Habitat is developing for benefit of the inhabitants of the camps or the owner of the farm.

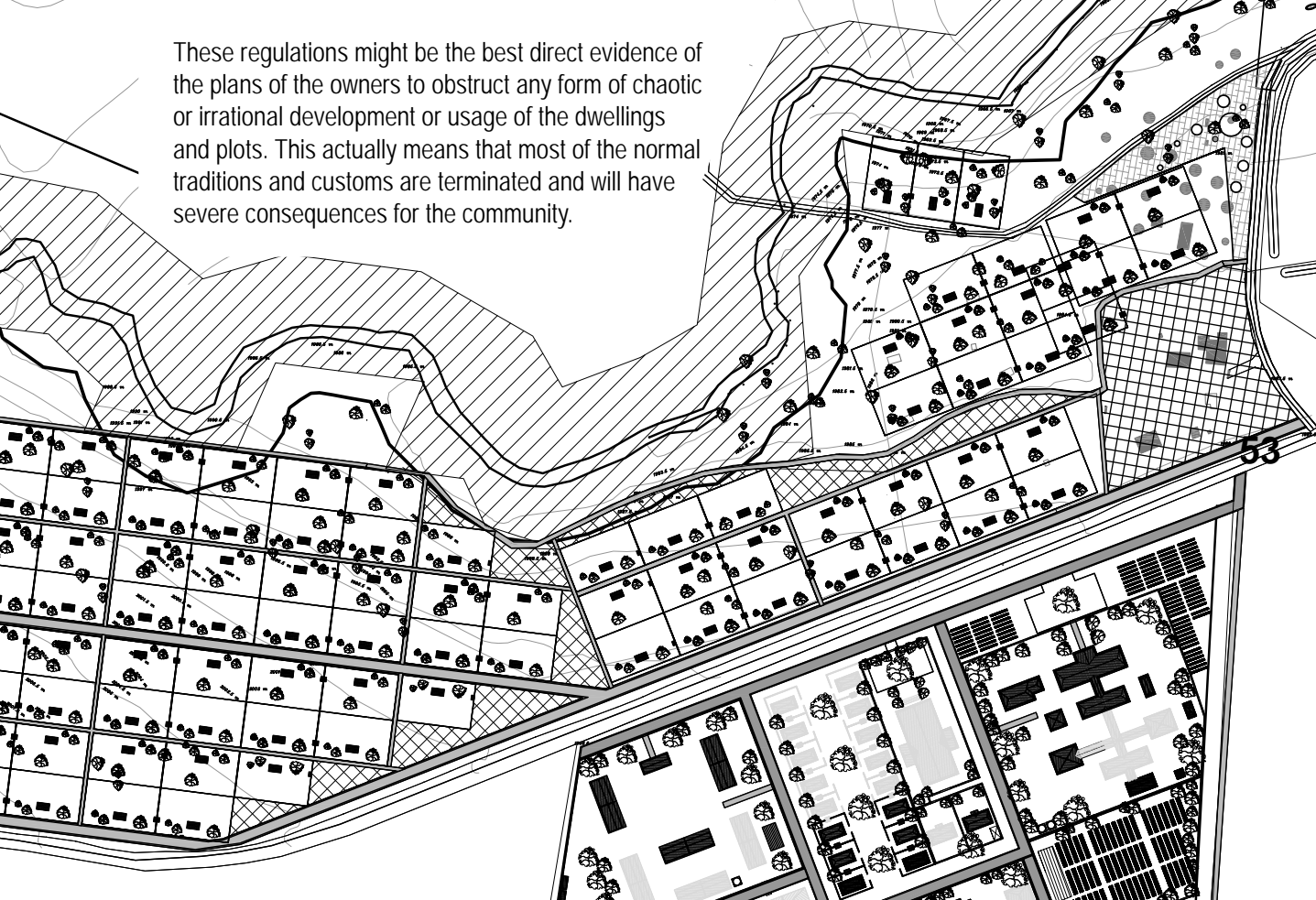
REGULATIONS BY THE MOUNT ELGON TRUST

In order to prevent that the “new village” will slip into the same conditions as the current camps the owners came up with a list of regulations. Their aim is to translate these rules into a contract which the future inhabitants need to sign at purchase of a dwelling. The list below is a first draft of this contract:

- Physical structures: the inhabitants will not be allowed to build any additional structures (they will all want a maize store, a chicken shed, mud houses for their kids, etc. this is one of the main reasons why the current camps are grown into slums)
- Usage of sanitation: inhabitants are not allowed to urinate or other on their plot (they have to use the sanitation which is provided with the house)
- Livestock: the amount and types of livestock need to be determined to prevent inconvenience to neighbours (livestock that should be included are: cows, goats, chickens, ducks, dogs and cats).
- Crop: The type and amount of crop (to prevent that people are not all producing the same crop or using a crop that might cause inconvenience to neighbours).
- Burial: inhabitants will not be allowed to bury their deceased on the plot (there will be a graveyard on the new development site where they have the opportunity for burial).
- Sale, purchase & rental: When the owner will be able to sell the house and who will be allowed to buy the house (1st refusal should be for the farm as we will make sure the right person gets it and not a rich investor. Also mafia/mungiki group taking over is at risk).
- Visitors: the amount and time that relatives or friends are staying at a plot (culturally you are more or less obliged to take in your homeless relatives and this could mean that the estates are easily overgrown).



These regulations might be the best direct evidence of the plans of the owners to obstruct any form of chaotic or irrational development or usage of the dwellings and plots. This actually means that most of the normal traditions and customs are terminated and will have severe consequences for the community.





PILOT PROJECT HABITAT & PILOT PROJECT BACK2AFRICA

In march 2010 Habitat for humanity Kenya started to construct the new camp on mount elgon. They signed a contract with the mount Elgon trust (part of the farm). The contract says that they would have to finish 120 houses in two years' time their master plan is shown on page 48. After 6 months they only build two houses



which was a major concern for the owner. The Back2africa foundation was asked to help with the engineering problems and also to come up with a new master plan that was more rational and logic. Construction of the first houses started in September and after three months of intense work twenty houses were finished. Although more houses could fit in the area the same critique can be formulated for this new plan (as described in the habitat plan).

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METHODOLOGY

To understand the context and all occurring problems between developer and inhabitants I'm explaining the perspectives of both sides in the first and second part of this research. I'm formulating their point of view based on my own observations during the years that I was involved with the developers as well as the inhabitants. When we take a look on the research topics that revolves around two main themes which are: dwelling and inhabitant I tried to formulate as many opinions on the subthemes and questions that I formulated in the research topics as possible.

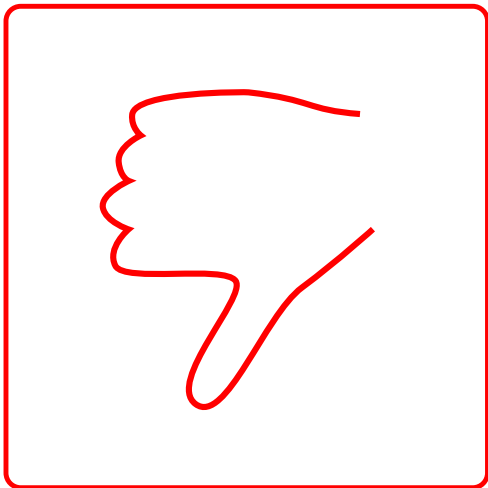
In both parts I will address positive and negative issues that the developer or inhabitant talked about during the last years. Eventually I will explain the contradictions and similarities between both groups which basically means that I want to explain where both parties agree and don't agree on. If they agree and on what is simply derived when we place the positive and negative issues of developer and inhabitants next to each other. The issues that they agree on could possibly be used to improve the relation and communication between both groups. The issues that they don't agree on should be explained what is the main cause of this different stance and how both groups can come to an understanding and agreement.

THE DEVELOPER'S PERSPECTIVE

In this first part of the research we take a close look on what the developer's (the owner of the farm, his wife and habitat for humanity) opinions are. What problems does the developer see? Why does he want to solve them and more importantly how and where? Obviously the developer sees great importance in the replacement of the people and has his reasons to change the living conditions of his workers.

Through extensive conversations with the owner, his wife and habitat for humanity and a working relation of over two years I was able to formulate the following positive and negative stances from the developers. On the image on the left you can see the almost full development staff. During my years working as a volunteer for the different projects I worked together with almost the whole staff and gained insight into their perspective. The issues mentioned on the upcoming pages is a translation on how these relate to the different parts of the research topics.

The mentioned issues are translated to icons, reason for that is to make the comparison in a later moment easier. When an icon is marked as green the developer sees this issue as a positive point. When the icon is marked in red the developer sees the issue as a negative point.





MATERIAL: durability

In the past the community produced dwellings that wouldn't last longer than one generation. The dwelling was built only from organic materials found in the direct surrounding. This meant they had to restore plaster and construction during their lives spent in the dwelling. In the eyes of the developers this way of constructing doesn't only threaten the quality of living but also looks inferior. The main concern of the developers is to improve both life quality and aesthetics through enhancing the quality of life spent in the dwelling.



CONSTRUCTION Manual

Construction method is very close to the materialization of the dwelling. In the past the only construction technique they were using was pieces of rope. Again, the developers view this method of construction as having a negative effect on the life quality within the dwelling. The developers aim is to make as many mechanical made parts as possible to improve the building quality and lifecycle.



FAMILY: size

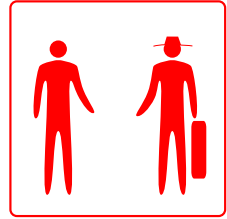
Although only 60% of the inhabitants of the camps actually work at the farm and have a steady income, the average amount of children is around 5. It's not a surprise that most families struggle to feed all their children. In the eyes of the developers families should be reduced so they will be able to feed their children easily and offer them good education and in general a better life. The new dwellings only offer room for a maximum of three children. The developers want to send out a signal that families should start planning their family size in the future, a service which is offered at the hospital of the farm. The new plan will have an extension possibility but it remains unclear if people will purchase such an extension in the future because of the costs.





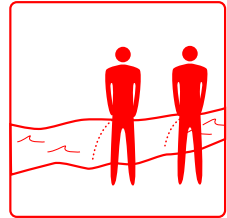
FAMILY: relatives

From the culture it is normal that people offer relatives and friends a place to sleep when they ask. This can differ from somebody that's travelling and needs a place to sleep, to somebody that lost his home and is looking for a place to stay. For the people that are planning to stay for longer, most of them get a place on the family compound to build their own dwelling. In the developer's opinion this is one of the main problems with the high density of the current camps. The strategy is to decrease density and to stop the sprawl of dwellings by disallowing the erection of additional structures on their new family compound which is currently under construction. Another form of cutting the urban growth is that people are not allowed to repair their current dwellings inside the camp. Which means that all the houses are slowly deteriorating.



PROGRAM: toilet

One of the biggest causes of bad living quality is the lack and the poor quality of the lavatories. But there is another important factor in terms of usage of the toilets. In terms of local customs they are used to just walking into the bushes to urinate. Most of the time they just dig a small hole with their hands or simply walk to the river. When only a few people are using this method on a square kilometre it is not a problem, but because of the high density of the camps it does become a problem. Again through regulations on the density growth and offering individual good sanitation units, the developers hope to tackle this problem.



PROGRAM: bathroom

Most inhabitants simply wash themselves behind the house. The people that are surrounded by other dwellings build a temporary structure made out of branches, plastic and mays leaves. Main problems for the owners are the aesthetics and life quality of the structures. It creates a lot of water that offers breeding places for mosquitoes.





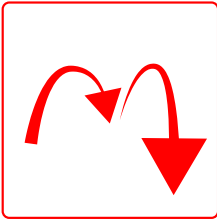
PROGRAM: kitchen

All inhabitants cook on open fire, 50% of the inhabitants doing so outside. Some of inhabitants have temporary structures where they cook in. These structures differ from a small thatched roof to a whole built structure. The main problem of this outside cooking is the danger of fire spreading to the surrounding dwellings which have thatched roofs. The developers want to offer the inhabitants a kitchen inside their house provided with a good chimney.



GEOGRAPHY: position

The grandfather of the owner allowed workers to construct temporary dwellings on the farm ground so that they could live close to their work during the week. Over the years this grew out to what the camps are right now. With the replacement of the farm some 500 meters from the current location, the camps are positioned on the wrong side of the Kaptega River. This river splits the farm in two. The right side is planned to be forest and private ground. In the new localization the developers try to make a compact plan. The left side is planned for the new farm (already 5 greenhouses finished and in use). All the workers that live in the farm camps need to be repositioned in the eyes of the developers to the new location. All the non-workers will be moved to a small plot on the corner of the farm. All the structures of the families that are resettled will be removed. Because of the history (buried inhabitants) of the current camp locations there is no other possibility than turning them into forest.





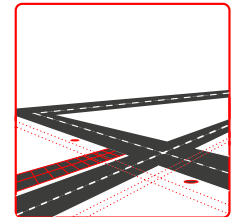
FORM: multiple

One of the many customs that the inhabitants have is circumcision. Although for girls it's almost fully banned for boys it is the only way to be accepted as a man. That girls aren't circumcised doesn't mean that they don't have to leave the family house. Just like boys they have to leave the family structure after a certain age. Both girls and boys have to build their own houses and need to start living like an adult. The consequence is that every family needs at least three structures on their compound. Every family has at least a family house and a kitchen. When girls are becoming 5-6 years old they will need to start living outside the family house. In most cases the kitchen is used as a bedroom for the girls. Boys and girls are not allowed sleep together so when boys are becoming 5-6 years old they will need to start living in another structure. This means that most families (that have both girls and boys) will need to build at least structures. Again this is one of the main causes of the high density in the camps.



GEOGRAPHY: infrastructure

The camps have no infrastructure. The whole location grew over the years and was never organized. During rainy season the sand and clay transform into a desert of mud. This is not only the problem for the inhabitants but is also a major problem in the transportation of the farm. Upgrading the current infrastructure into a well-covered and organized system will be the aim of the owners for the whole area.





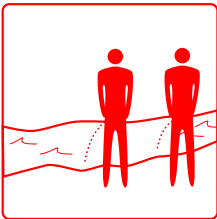
ACTIVITY: cooking

Most of the preparations of the food in the eyes of the developers is being done in a bad working position and depends on the lack of equipment in the kitchen. The kitchen that is designed in the new dwelling will have a worktop.



ACTIVITY: sanitation

“One of the biggest causes of bad living quality is the lack and the poor quality of the lavatories”⁷. But there is another important factor in terms of toilet usage. From the cultural perspective people used to just walk into the bush and urinate there. Most of the time they would just dig a small hole with their hands or simply walk to the river. When only a few people are using this method on a kilometre it wouldn't be a problem, but because of the high density of the camps it does become a problem. This will hopefully be dealt with through regulations on the density growth and the offering of individual sanitation units”.



Most inhabitants simply wash themselves behind the house. The people that are surrounded by other dwellings build a temporary structure made out of branches, plastic and mays leaves. Main problems for the owners are the aesthetics and life quality of the structures. It creates a lot of water that offers breeding places for mosquitoes.





ORGANIZATION: density

The most problematic consequence of all the above is density. It is essential to understand that the above arguments are from the perspective of the owners. The question remains if the solution for these issues lies in solving them as they are doing right now. In Part II we will show all the aspects from the inhabitants' perspective and will show that they have a completely different opinion on the matter. For the owners, the density is the most problematic and the main reason for the poor living quality inside the camps. In their eyes, the solution for this problem lies in the new camp design that is being developed.



NEGATIVE
POSITIVE

MATERIAL: durability

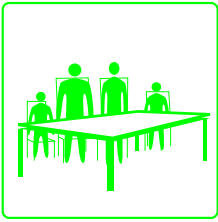
Inside the camps, 20 houses were constructed by the father of the owner and date back to 1980. These structures built from cement blocks and concrete beams sometimes seem to be built to last for centuries. The owners directly relate living quality to the durability of the dwelling, thereby forming the main solution for the new development.



CONSTRUCTION: mechanical

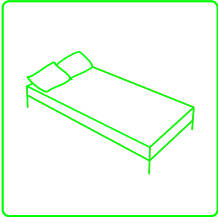
The same 20 houses built from cement blocks, concrete beams and prefabricated trusses made by carpenters, are the example the new dwelling designs were based on. In the developer's point of view these structures offer the best dwellings inside the current camps. And because they were mechanically built they offer durable houses which provide a better living quality.





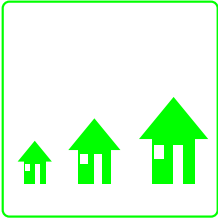
PROGRAM: living room

When you compare the average current living structure next to the new design the size of the family structure doesn't differ that much. The traditional house consisted only of one room which was for living, sleeping, storage, etc. Of course when this size of dwelling works, there shouldn't be a problem with leaving the size the same. But it also depends a lot on the price of the dwelling.



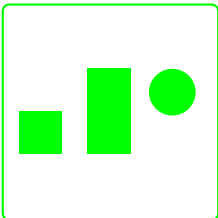
- bedroom

Also the bedroom is kept the same size. The only difference between the old and new situation is that the bedrooms won't be part of the living room anymore. Traditionally these were separated by curtains and are now replaced by walls. The dimensions are based on the beds and remain the same.



FORM:size

As described in program, the size of living space remains the same. In the view of the owners it offers primarily enough to house a family and is the most economical way of offering a dwelling.



- shape

In the current camps of the farm there is a wide differentiation in size and shape. Main forms are square, rectangular and circular. From the economical point of view the developers decided to design rectangular house because they offer the best space-price relationship.





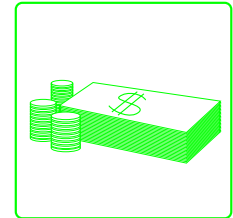
ACTIVITY: religion

When looked at the statistics of the interviews shown in part II you can tell straight away that it's a very important matter. In the region there are many churches available and many people come all the way from Uganda for Sunday mass. Because of the positive location of the farm being the nearest to the border, the farm wants to build a large church so not only the workers but a vast amount of people in the region can come to the same church. Beside that fact the owners are religious themselves they want to support the gathering of the community as much as possible.



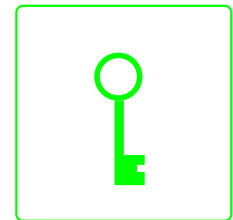
COSTS: amount

Of course the developers don't deny the extremely low cost of the current dwellings of the camps. To gain a higher quality of life there is no other way than to invest in a more durable and expensive dwelling. The aim of the first phase of the project is to provide 90 families working for the farm and 20 families from the region with 1000 square meters of land, a family house, toilet and bathroom. This all for only 150.000 Ksh (1500 euro). This amount was calculated on what an average worker is earning and the time he will need to pay the whole amount back. On average it should be paid off between 7 or 8 years. The mortgage will be held in from their monthly salary.

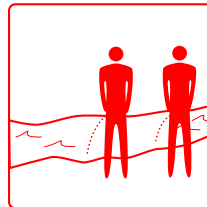
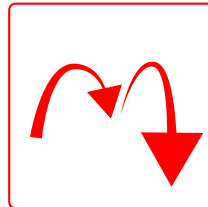
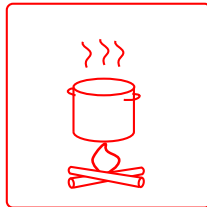
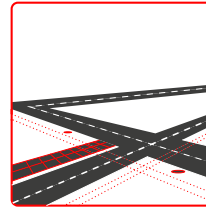
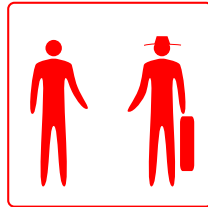
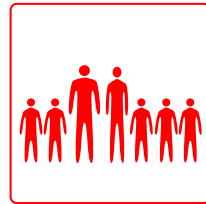
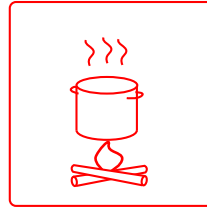


- owner

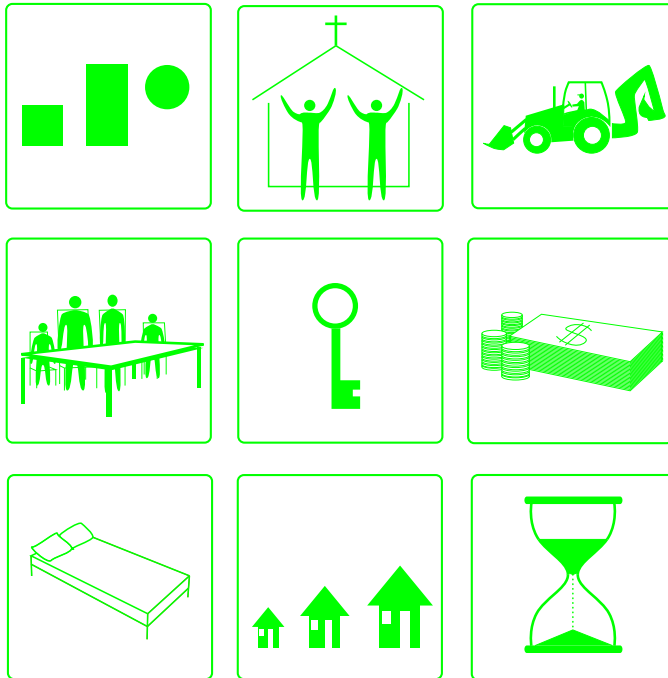
Ownership is a positive point for the owners of the farm. Because these people just started to live wherever they want without paying, the farm is still the owner of the land and structures on it. This means that they can resettle or remove people as they please. For the future houses the inhabitants will gain ownership of land and structures, which is in the view of the farm a positive solution. Because the inhabitants are the owners they will take better care of their house and land.



DEVELOPERS PERSPECTIVE



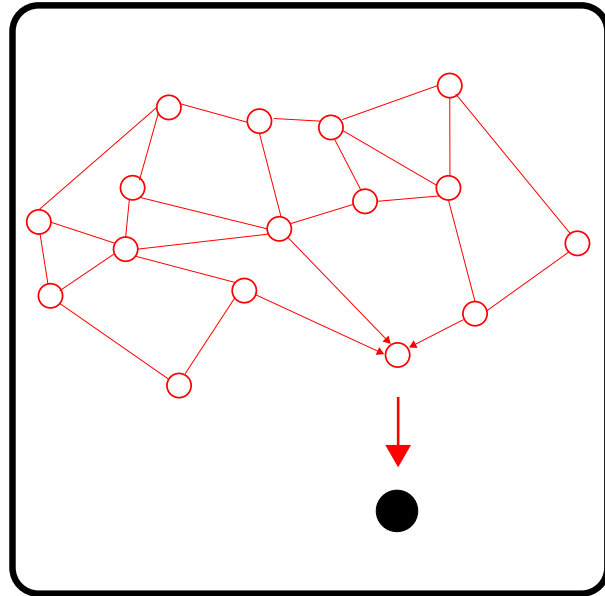
CONCLUSION



In the first part of this research, the issues on the left are explained and categorized as positive or negative. The aim of this overview of different issues is to give a short indication of the different issues and to make an easy comparison in the future of the issues derived in Parts II & III.

INHABITANTS PERSPECTIVE

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PREFACE
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INTRODUCTION
PART I
PART II
PART III
CONCLUSION

By working for a couple of years with the developers of Mount Elgon I gained insight on their aim and perspective for the inhabitants described in the first part of this research. More important of course, is what the inhabitants of the camps and the new camp think of their living situation. This second part of the research will convey insight on their perspective of life, future habitation and the possible preservation of customs and traditions. Based on several different types of research like interviews, observations and different types of analysis I'm trying to get as close as possible to the inhabitant's perspective. More important for this research is that I'm not trying to prove in this part what, where and how they would like to develop. It intends more to show that their perspective is rather in contrast with the developer. This effect called "friction" is explained and analysed in the third part of the research.

WHAT, WHERE AND WHO?

THE PAST HABITATION



In the first part of the research it becomes clear that the first generation of workers was often taken from far away. Because this region was a dangerous no man's land not a lot of people were occupying the area and because of that had to be searched far away. This is an obvious reason why people started to settle themselves in the perimeter of the farm. This area was protected by the owner and offered his workers a safe living environment close to the farm. What the background exactly is from this first generation of workers is not clear. It is known that they were picked from the nearby town called Kitale and that over the years it became the Provincetown of the region, but that doesn't mean that these people were actually living in this city.



That's because most people in those days were searching for jobs in Kitale while they actually often lived far from the town. Most of these people came from small self-regulated communities (villages). The structures they made on the farm and the organization were similar to the villages they used to live in. They had their own family compound and in most cases the people grouped themselves on basis of tribe. General regulation was just like in the village, with a chairman elected only by the owner of the farm.



The second generation of workers that worked for the father of the owner already started to become a blend of people that lived in the region and of people that already worked and lived near the farm. For the people that had to cover long distances to the farm they were again offered to settle themselves on the farm. Over the years friends and family from the different families that were living on the farm started to settle themselves on the family compounds. It is normal in the Kenyan culture that during travel or when unemployed people take their relatives in their homes that they might build additional structures.

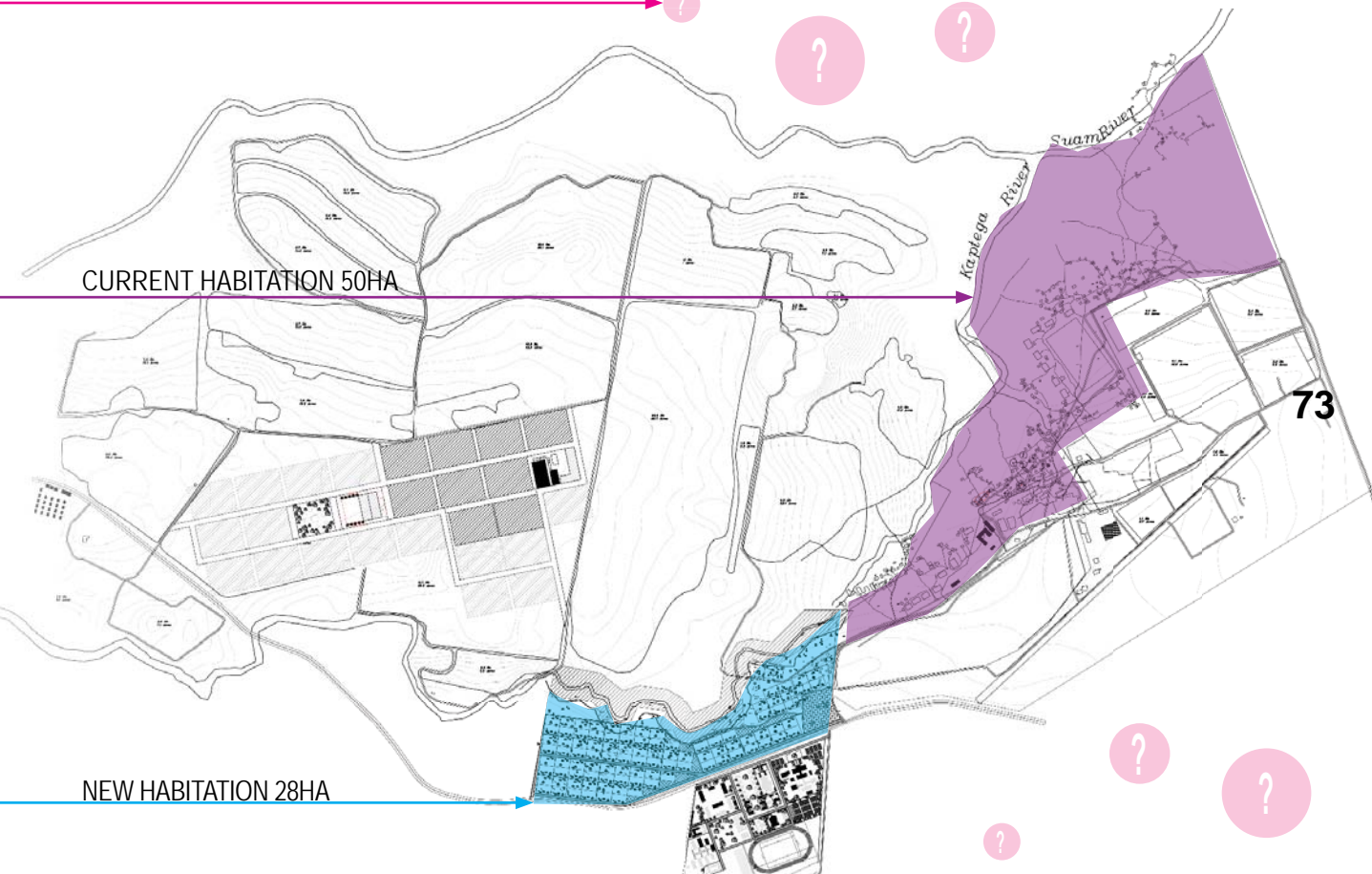
PAST HABITATION



CURRENT HABITATION 50HA

73

NEW HABITATION 28HA



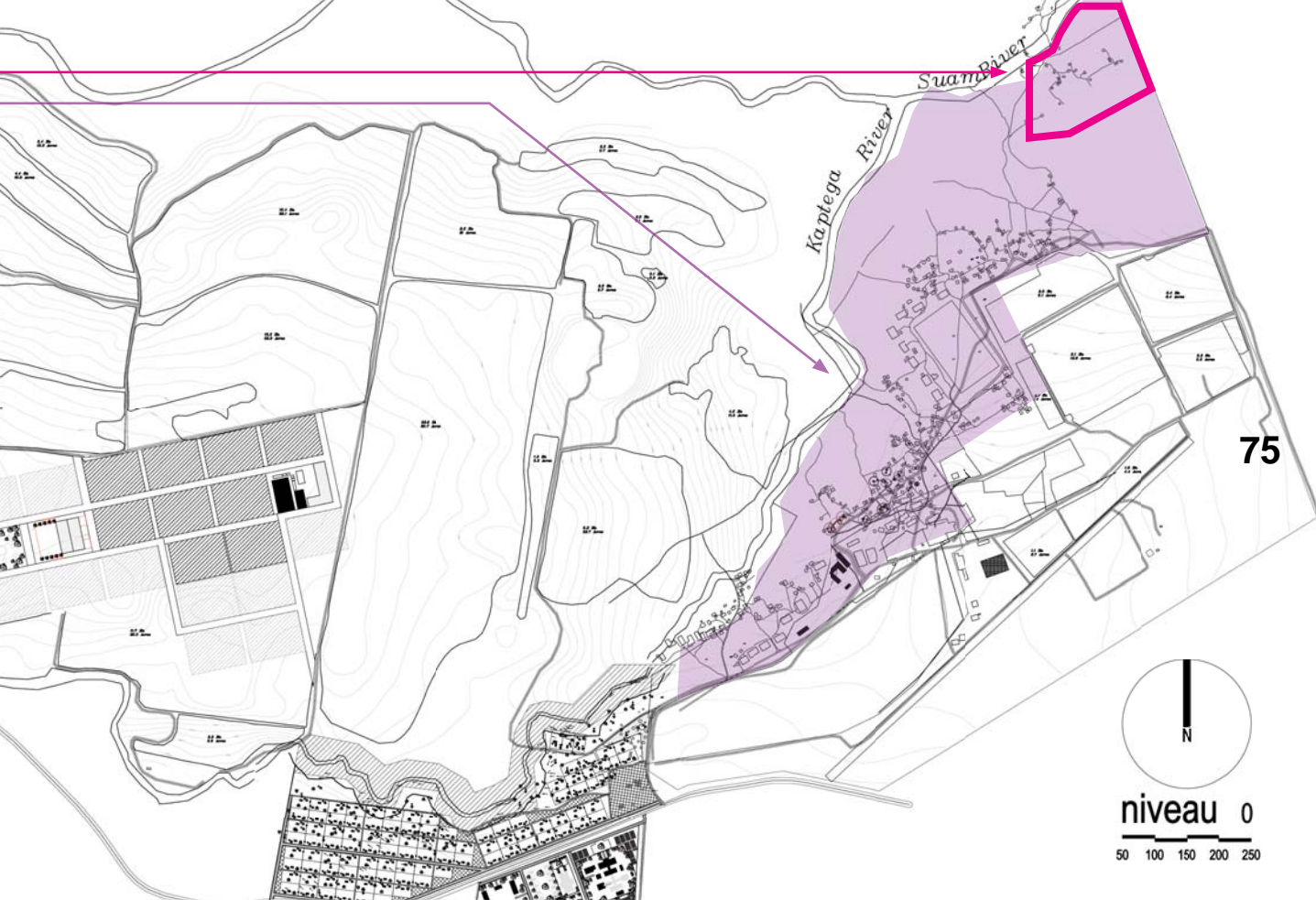
CURRENT HABITATION

The third and fourth generation currently inhabit the camps of the farm. Over the years these camps grew out to high density living areas. This has a lot to do with the customs described on the last page. Because of these customs at the moment there are over 5500 people living on an area of almost 50 ha. Main problem is that the dwellings are grouped on small areas where the terrain doesn't slope much. This leaves an area of nearly 9 ha. over for the dwelling to be built on. This means that every family has 90 square meters to build on.

74

At the moment there are almost 1000 people working on the farm and almost 40% of them live in the neighbourhood of the farm. This means that almost 80 percent of the camp's inhabitants live there illegally. This is also one of the main reasons why the owner wants to resettle the inhabitants. All the people that are left over will be forced to resettle in the area marked on the next page. The question that arises is what to do with almost 3500 people that will need to move to an area the size of nearly 5 ha.





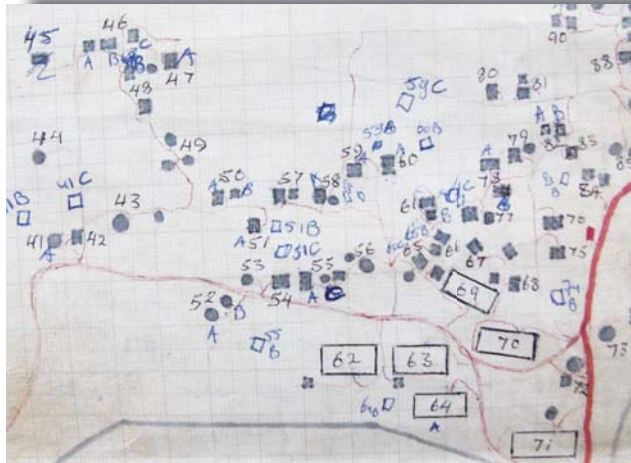
Suam River

Kaptega River

75



76

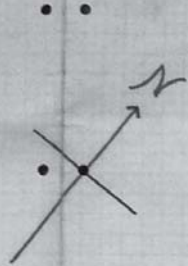


MAPPING THE CAMPS

The first step to gain insight on the perspective of the inhabitants was to understand who was living where and why. Most obvious step seemed for me to start with mapping out the camps. In the history of the farm there was one inventory performed but was never integrated worked out properly. Because of the late research on this topic little is known about first settlements and their inhabitants.

The analysis points out the type of dwelling, which people are living there, the amount of children per house, shops, bars, farmland, rivers, etc. In the image on the right this inventory is shown. In blue the rivers, in red roads and paths and the rest are dwellings. The image on the right bottom corner shows a zoom in on the map. From the first visits in the camp I tried to define the borders of the different camps, identify the tribes, locate commerce and agriculture and select case studies for later investigation.





Lokobo Camp I

Lokobo Camp II

soccer field

77

Camp Russia

Centre point of the research (613)

Bush shop

Bush shop

Stay over night house

Observed family (514)

Waterpoint

Chaimans house

Go Down Camp

Farm shop

Nancy's house



Session I



Session II





INTERVIEWING THE CURRENT INHABITANTS

After making the map, talking to the inhabitants seemed to be the best next step. To make sure that I would get usable data for my research I decided to setup an interview. The first version of the interview was in Swahili and was performed in the new camp area (appendix I). In the map on the left side you can see where the first two interview sessions were taken.

Main problems in the interview session were the location and the way the interviews were taken. Everybody was standing together and there was no privacy at all. Some people answered short and even by their facial expressions you could see that they were afraid. Afraid that maybe they would get fired by the owner because of certain answers, but also for not getting a new house because of giving the wrong answers. All the interview takers were working for the farm and my presence was also not really helping.



CAMP INHABITANTS



REGIONAL INHABITANTS



80

	00001	Mary Ayuma Lusamba		15
	00002	Ruth Nafula Nabuya		15
	00006	Emily Vuseletsa Ngaira		15
	00088	Vincent Wasike Wepukhulu		23
X	00103	Everlyne Nakhumicha George	✓	15
	00114	Rael Nafula Nabye		11
	00115	Gladya Nafula Kuteke		16
X	00118	Alice Nasambu Wekesa	✓	15
X	00127	Consolida Musabi Azimua	✓	15
	00135	Patrick Simiyu Wanjala		11
	00142	Concepter Nafula Mulongo		10
X	00150	Selina Astoo Kalado	✓	10
	00152	Janet Wekesa Wafulu		16
	00154	Boatrice Khayat Simiyu		15
	00158	Jacqueline Nalaka Sibindi		11
W	00165	Alice Akini Logg	✓	16
X	00166	Tedea Chapsameli Taro	✓	24
	00172	Wesley Kipkurui Cheruliot		10
	00176	Mary Wanjala Mabonga		17
X	00177	Alice Khata Nelima	✓	16
	00177	Mary Nafula Mrelo		16
	00184	Grace Namalwa Simili		16
	00188	Redemsta Nabangala Busuru		15
X	00190	Nelly Amunga Ambalei	✓	16
	00194	Heleen Nasambu Keyali		11
X	00198	John Wanjala Simiyu	✓	11
	00213	Sussy Nelima Wanyama		11
	00219	Bernard Simiyu Barasa		16
	00244	Redemta Nanjala Sikuta		11
X	00246	Margaret Adeke Amukule	✓	11
	00251	Margaret Nasimiyu Wangeseki		14
	00254	Rosemary Nanjala Eketi		11
	00258	Eunice Nafula Khaemba		11
	00265	Josephine Nanjala Sireng		11
X	00268	Rosemary Nekesa Barasa	✓	15
X	00269	Edward Mukirisa Mukirisa	✓	11
	00275	Andrew Kalilias Kalilias		11
	00279	Gladya Nasambu Wafulu		15
	00284	Everlyne Nanjala Barasa		15
	00285	Emase Lowoya Ekwame		10
X	00286	Jane Nasimiyu Nasimiyu	✓	14
	00297	Job Wanyonyi Nakhaima		14
	00304	John Nyongesa Mwendu		12
	00305	Eunice Chuai Andiryi		10
	00307	Isiah Kulecho Wafulu		14
X	00321	Topiater Nafula Wafulu	✓	16
	00323	Eunice Nasimiyu Nyukuri	✓	11
	00324	Mary Lemsi Kholoi		15
X	00330	Antony Wekesa Wamukota	✓	13
	00334	Margaret Nekesa Nekesa		14
	00335	Rose Wafulu Namalwa		11
X	00337	Catherine Namalwa Nyongesa	✓	12
	00340	Margaret Nasambu Welknabubi		17
	00341	Ann Nasimiyu Wekesa		13
	00343	Roselyne Tata Omuse		14
X	00347	Geoffrey Wekesa Wanyama	✓	13
	00351	Alice Nafula Wanyonyi		12
X	00353	Boatrice Nekesa Welkhanya	✓	12

In the second session we used the English version of the interviews. The interview takers requested the English version because for some reason that worked easier for them. I changed some of the questions to get more detailed data and this time people were taken separated for the interviews. Interview takers remained the same.

The interviewed inhabitants of session I&II were selected based on the list shown on the right page. These people have the most worked years, saved the most money in the Mount Elgon trust and told the owner that they would like to have a new dwelling. The three men on the right page were the interview takers of the first two sessions and are all working for the owner.

Also in the second session the interview takers and I decided that people were still not at ease and the answers were often short and without many details. So a couple of things had to change for the third and last session.



MANAGER HABITAT FOR HUMANITY



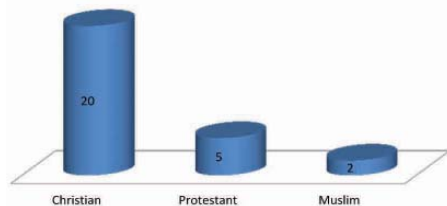
MANAGER MOUNT ELGON TRUST



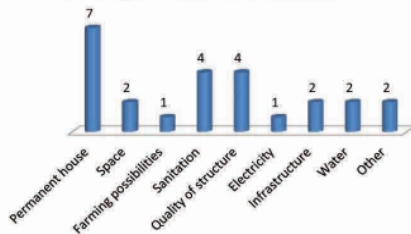
HYDRAFROM MACHINE OPERATOR

no app.
b7 in camp → no house/plot performance?

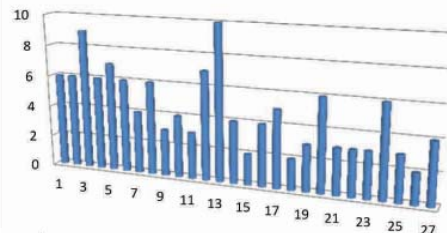
Religion



Change in current situation?



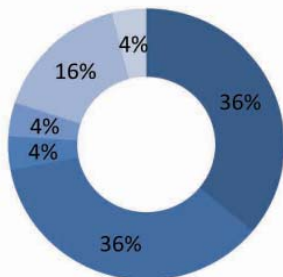
Amount of children



82

Tribe

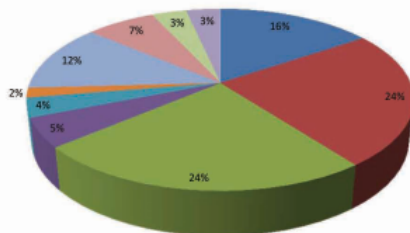
- Bukusu
- Luhya
- Wanga
- Sabuti
- Turkana
- Sabauti



STATISTICS INTERVIEWS

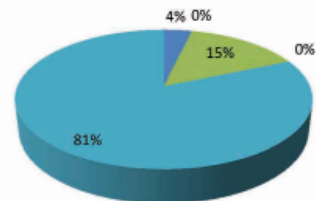
Customs and Traditions

- (Anniversary) parties
- Weddings
- Circumcision
- Baptism
- Animal keeping
- Religious meetings
- Paying dowry
- Rearing cattle
- Celebrations which are not cultural
- Initiations



Choice for accommodation

- 1A
- 1B
- 2A
- 2B
- Unknown



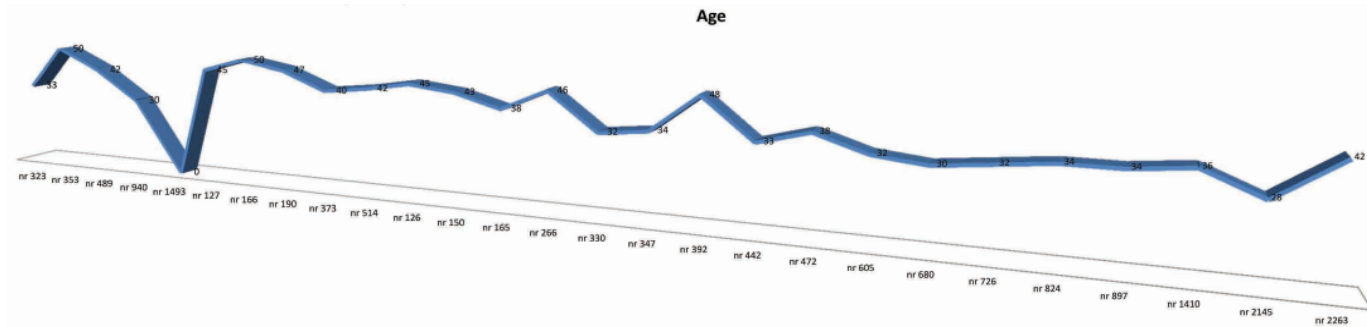
Public events

- Public holidays
- Religious event
- Business
- Farming
- Other
- Unknown



For this last session we selected people at random and I changed interview takers. The first image to the right shows me with the three of them. They are teachers at the primary school and are well known as trustworthy people by the inhabitants. Also I decided to interview people at home without my presence. This had a major effect on the outcome of the interviews. In appendix III,IV and V one interview is selected as an example from interview sessions I, II and III.

The results of the interviews are translated to facts and statistics which are shown on the left page. These facts will be used in the design stage which will formulate a possible scenario for the inhabitants. The interviews itself were meant to gain insight on the background, customs, traditions but also the inhabitants hopes and dreams. After all this part of the research is meant to formulate the perspective and with that the opinion of the inhabitants.



NAOMI 15

ALICE 40

DORIKAS 11

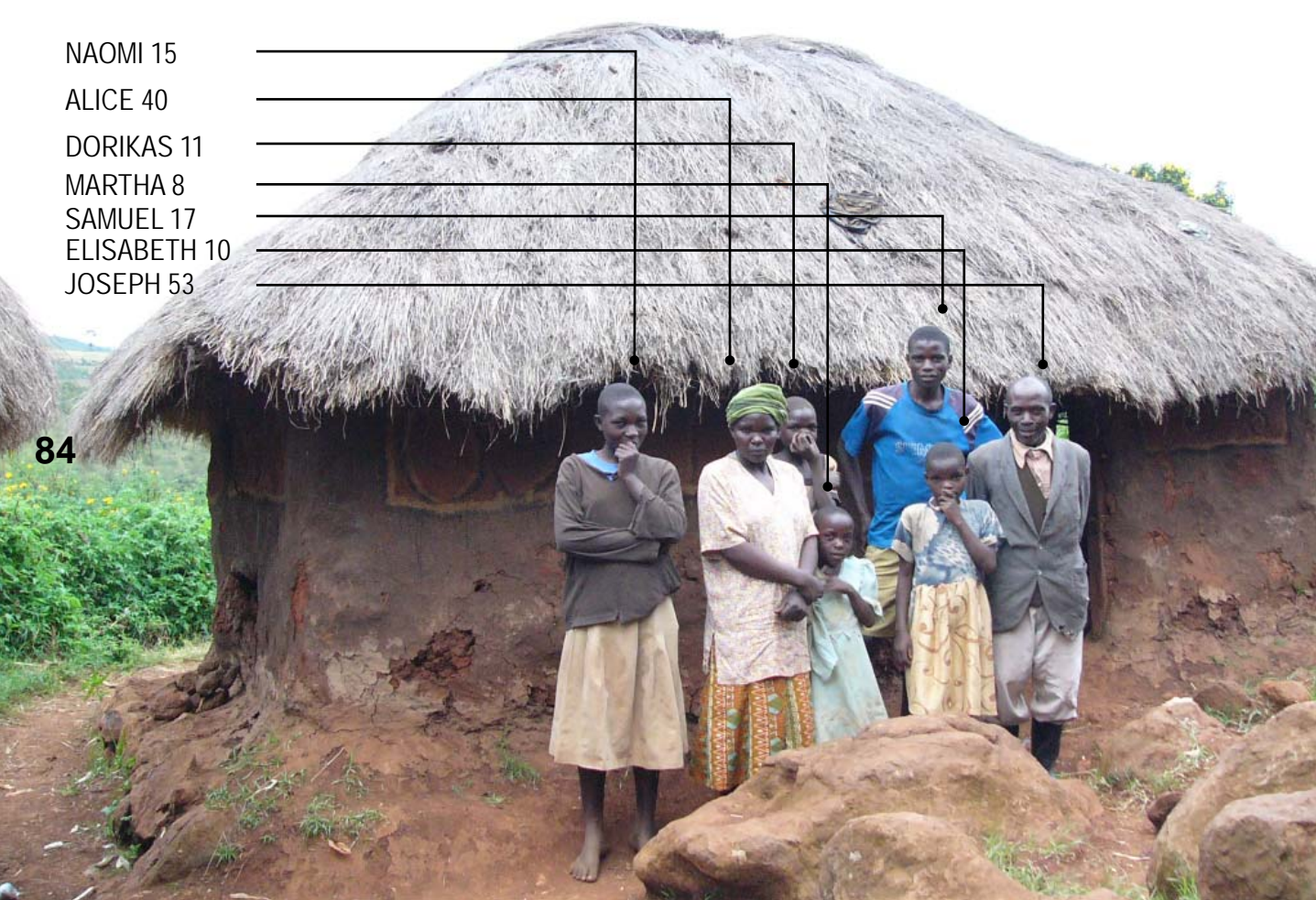
MARTHA 8

SAMUEL 17

ELISABETH 10

JOSEPH 53

84



24 HOUR OBSERVATION

Most of the data gathered from the interviews is not directly related to spatial aspects. To understand how these values effect daily life and more importantly how they affect the inhabitants and their dwellings I had to make a daily observation. I met Joseph (father of the family) once when I was walking through the camps. He is proud of his family and asked me if he could help me with my research. By now most inhabitants understood that I was trying to translate their opinion to the developer. I told him I would like to understand everyday family life better. He told me he would be happy to invite me to be a part of his family.

Around 4:30 the next morning I left to the family and just walked around their family compound to observe what they were doing, where and why. Of course they didn't felt very comfortable with me when I started, from the other way around who would feel comfortable when somebody is watching them by every move. But with help of the father everybody answered the questions I had and showed me around the family compound.

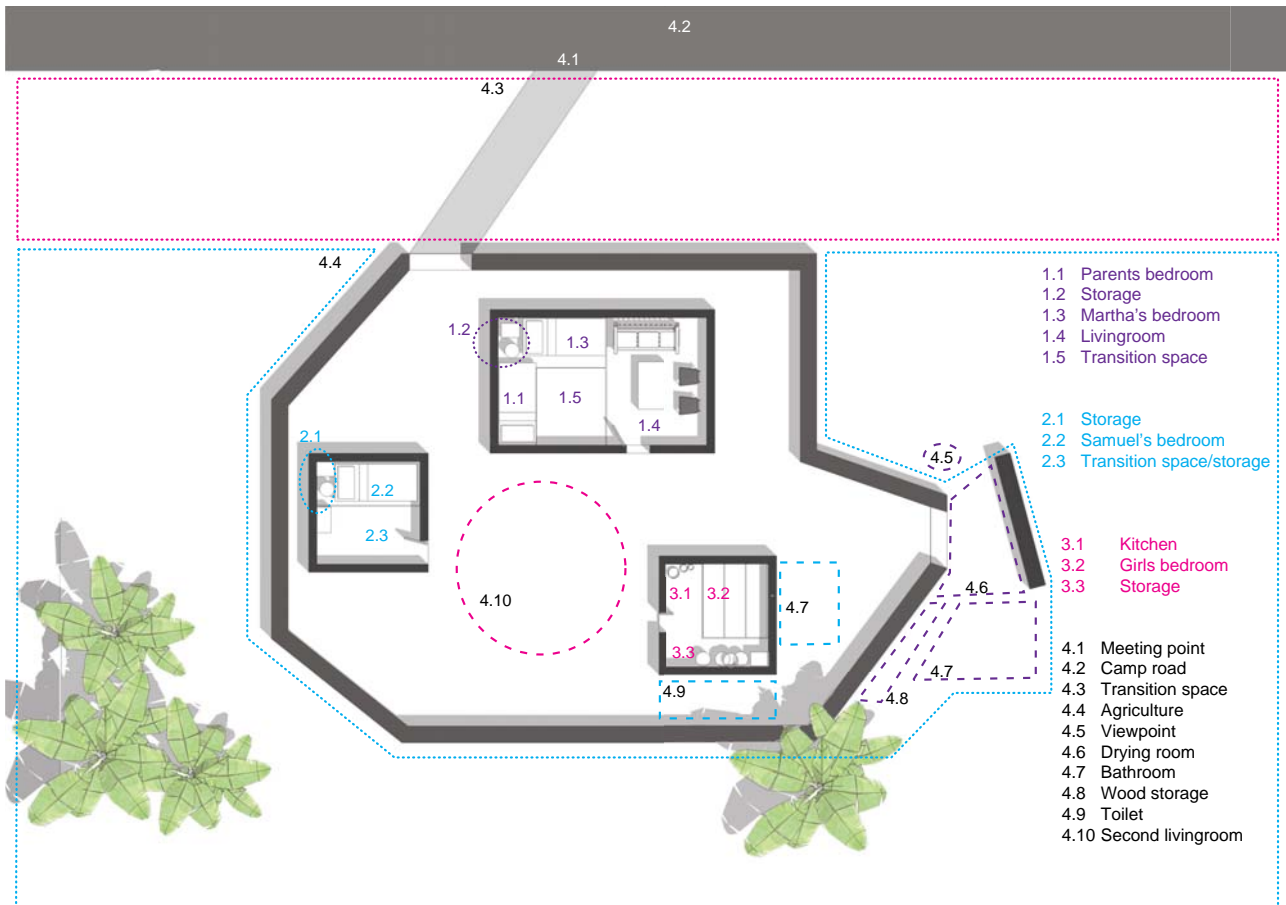
85



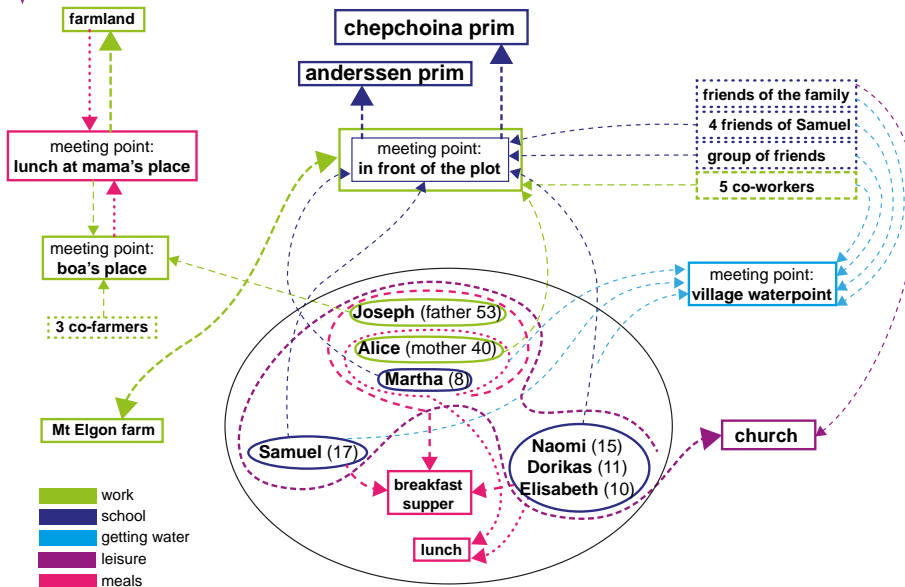
The next three diagrams are the results of this analysis. **Layout of the family compound,** _____
structures and function are on the right.

86

The structure on the middle is the family house, this is the dwelling where the parents live and Martha (8, see last page). The left side of the house is reserved for sleeping. They placed two beds and use cloths to make a separation between the two bedrooms (Parents and Martha). Round the beds large bins are placed for storage purposes. In total this almost covers half of the family dwelling, the other half is used as living space. Compared to other households this living room is something special because of the couch, chairs and large table. That the family had this living space tells us something about status. The only other examples of this kind of living space I have seen are at the houses of the chairman, other pastors or people that have a well-paying job at the farm. The dwelling on the left side is the house of Samuel, he is seventeen so supposed to live on himself. If we compare his dwelling with the kitchen/bedroom of his sisters it is really luxurious. Not only does he have a bed and small cabinet to store his clothes he also has a bicycle. Again his dwelling is also divided into two parts by a thin cloth. The rest of his dwelling is used as storage space. The dwelling on the right side is the kitchen space which also functions as the dwelling for the girls. During the day sleeping materials are stored on the backside of the dwelling and has the kitchen full working space. At night mats are rolled out and a mosquito net is hung above the beds of the girls. The net is the only one the family has, in this dwelling there is no separation between the different functions and is most space used for storage. As you can see in the image is the compound bordered with a low green fence and has a couple of banana trees. A small path leads to the main road which is visualized in dark grey. Round the family compound there are also different outdoor functions. These are not defined by anything and are for that reason marked with a dotted line. The central circular space is the general space where the family gathers and eats. This place is also used to dry mays to prepare all kinds of products for cooking but also just to sit and talk. Behind the kitchen space there is an area to wash yourself out of sight of others and on the other corner a place to wash clothes. The right edge of the family compound is used for drying clothes, growing vegetables and for midnight sanitation emergencies.

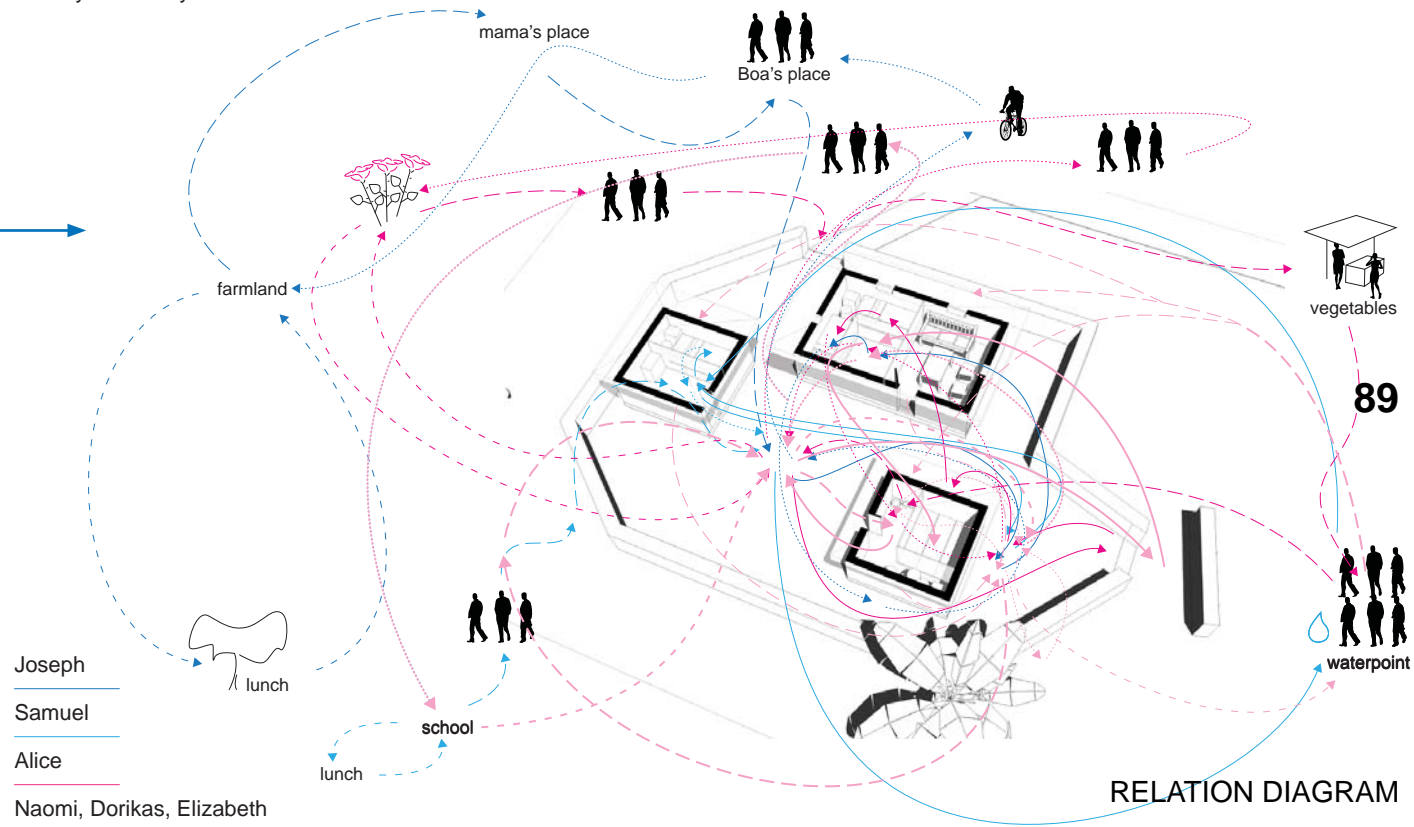


The image below is a **functional scheme of the individual movement of the family** during the day (in appendix VI you can find all activity through the day). From this observation some of the key components of movement and organization became clear, along with the relations with different families and where and when they met. One of the key values is the main road then runs through all the camps. This road is used by the farmworkers to go to work together in the morning, but also for children to walk to school together. Another important place of social activity is the water source, where children from all ages meet each other throughout the day. The problem with this diagram that it wasn't communicating the movement of the family and the usage of the outdoor spaces very well. For this reason I made the 3d visualization with **movement patterns of the whole family** during morning, afternoon and night. These different moments are indicated from dotted to straight line. Now we can see how important the central living area is and how much it is used throughout the day. Also the movement to the washing space is intense. Another important issue arises is the importance of the different structures. How they communicate to each other and their surroundings. But also the communication and possibility of movement between the different structures. One of the most important parts on this way of living that I learned from the family is the importance of the separate structures. That children are learned to be self-reliant on a young age and learns them how to become an adult between the safe borders of the family.



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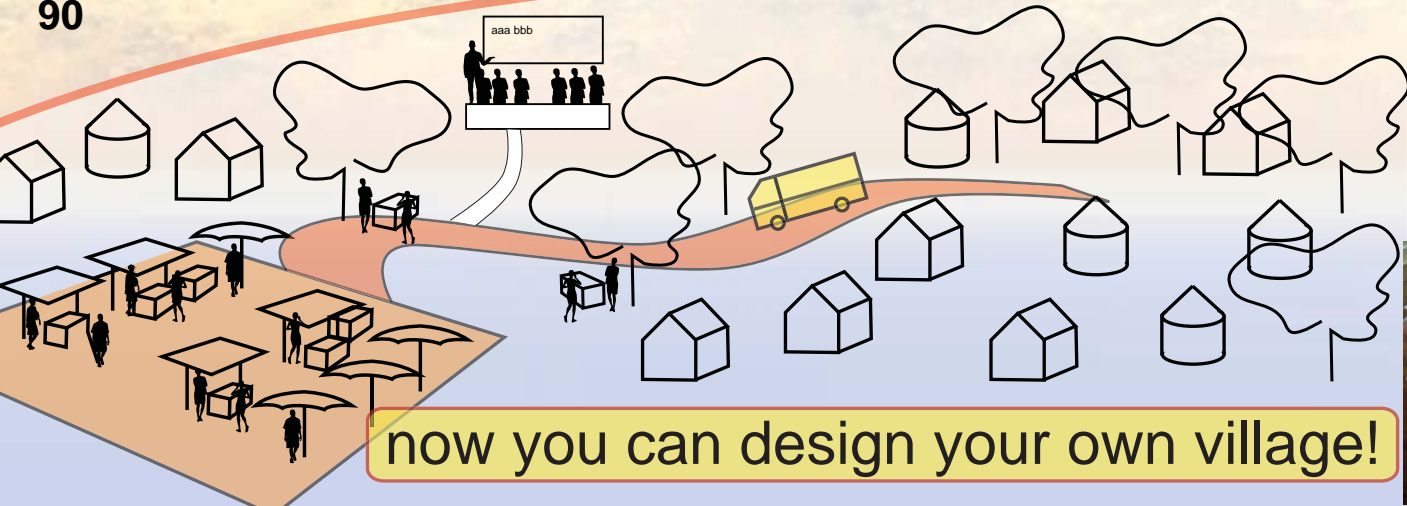
monday - saturday routes



KIJIJI CHA NDOTO

the dream village

90

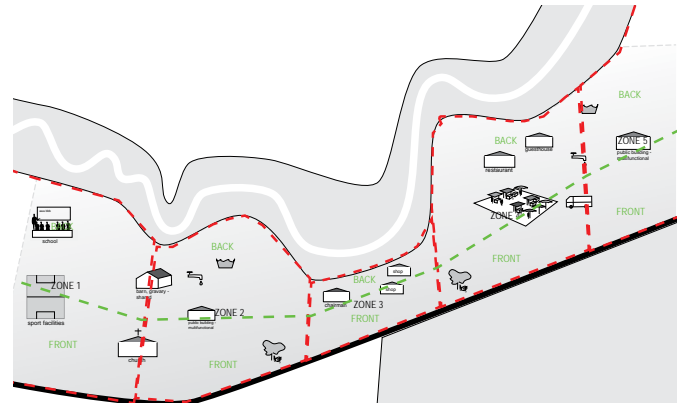
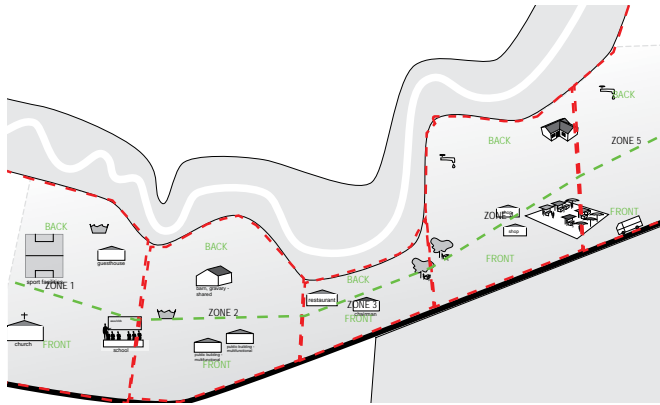


now you can design your own village!

THE BOARD GAME

After the interviews and observation I had a clear theoretical framework to build on. But the spatial interpretation of culture and customs should not only be analysed by theory. Therefore I had to search for a more pragmatic way to gain insight on how and where the community organizes activities. A board game seemed the best way to take away the stress of questions and answers and just give people the opportunity to show what their ideal village would look like. During a couple of days we played the board game with 15 different people living inside the current camps. On the left page you can see the board game named: Dream Village. The board was covered with a map of the habitat location, because map reading is difficult for most inhabitants we indicated them where the road to Suam is, where the Kaptega river runs and where boas place (future market place) is. The pieces I made for on the board game where: houses, church, market place, water collection point, school, chairman, bush shops, etc. All the contestants showed their ideal village without knowing or seeing what the others gave as a possible scenario. The board games were performed at the inhabitants homes and explained by local people.





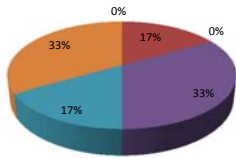
BOARDGAME STATISTICS

From every contestant we made photographs from the final solutions. After that the analysis started. By dividing the map into 5 zones (shown in the image above) I was able to derive statistic values from the different solutions. The analysis is shown on the left pages. What started as a way to grasp the first steps towards a first sketch design of the urban planning soon became a whole research in itself.

From the first analysis it became clear that the position of certain public functions is determined by a type of spatial organization based on cultural values. This is because although the people have a different background there is a public opinion about the position of public functions. This proves in certain ways that every community has a natural way of organizing their public space and that ignoring this organization frustrates communal organization. This therefore indicates that the current development of the new camp poses possible problems for inhabitants in the future..

House

■ Zone 1 ■ Zone 2 ■ Zone 3 ■ Zone 4 ■ Zone 5 ■ No choice



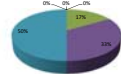
Barn, Gravy - Shared

■ Zone 1 ■ Zone 2 ■ Zone 3 ■ Zone 4 ■ Zone 5 ■ No choice



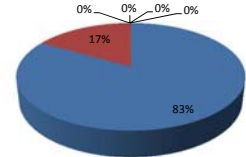
Matatu Station

■ Zone 1 ■ Zone 2 ■ Zone 3 ■ Zone 4 ■ Zone 5 ■ No choice



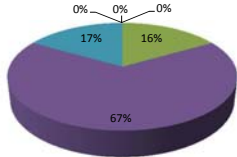
School

■ Zone 1 ■ Zone 2 ■ Zone 3 ■ Zone 4 ■ Zone 5 ■ No choice



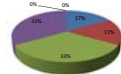
Market Place

■ Zone 1 ■ Zone 2 ■ Zone 3 ■ Zone 4 ■ Zone 5 ■ No choice



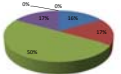
Restaurant

■ Zone 1 ■ Zone 2 ■ Zone 3 ■ Zone 4 ■ Zone 5 ■ No choice



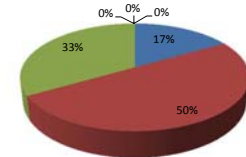
Guesthouse

■ Zone 1 ■ Zone 2 ■ Zone 3 ■ Zone 4 ■ Zone 5 ■ No choice



Church

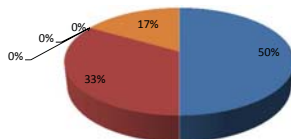
■ Zone 1 ■ Zone 2 ■ Zone 3 ■ Zone 4 ■ Zone 5 ■ No choice



93

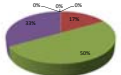
Sport Facilities

■ Zone 1 ■ Zone 2 ■ Zone 3 ■ Zone 4 ■ Zone 5 ■ No choice



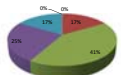
Chairman

■ Zone 1 ■ Zone 2 ■ Zone 3 ■ Zone 4 ■ Zone 5 ■ No choice



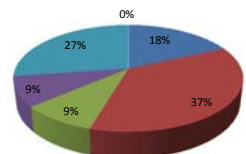
Shop

■ Zone 1 ■ Zone 2 ■ Zone 3 ■ Zone 4 ■ Zone 5 ■ No choice



Public Building - Multifunctional

■ Zone 1 ■ Zone 2 ■ Zone 3 ■ Zone 4 ■ Zone 5 ■ No choice



HERITAGE AND TRADITIONS

From extensive conversations with the chairman of one of the camps I realized that the first generation inhabitants of the camps lived in groups of their own tribe. Because of exponential growth and shortage of land the tribes slowly started to blend. At this time almost all the camps were multi-cultural and most of them even preferred to live with other tribes than their own, leading to a high number of intermarriages. That doesn't mean that the cultural and historical background should not be included in this research. Most of the tribes still live by their own traditions, celebrations, organizations, etc. At the moment the following tribes are living in the different camps (see map page 55):

Lokobo Camp I (former Turkana camp)

- Luhya (bukusu) -Turkana

Lokobo Camp II (former Turkana camp)

- Luhya - Turkana - Saboti

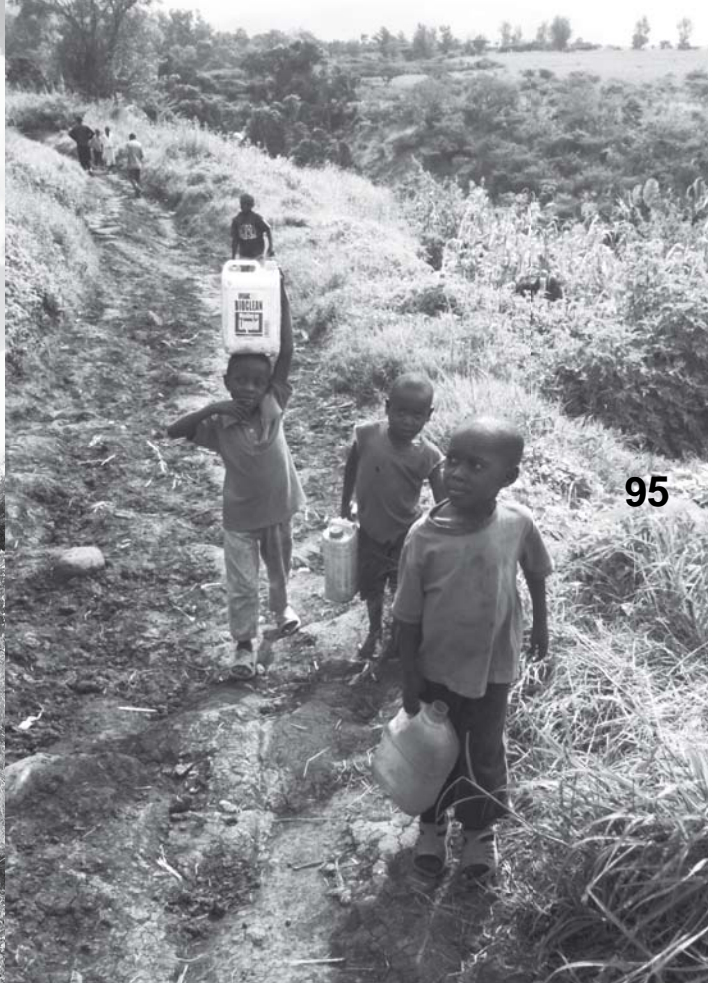
Go Down Camp (former Luhya camp)

- Teso - Luhya - Turkana - Saboti

Camp Russia (was always mixed)

- Teso - Luhya - Turkana - Saboti

From the statistics of the interviews it became clear that the Luhya and Turkana are the two largest tribes in the camps. For a general perspective on cultural heritage I used historical literature to describe basic information about the tribes' histories and customs. This part of the research is not meant to make a full inventory of the tribes' customs but to give a global insight on the tribes' backgrounds. With this historical framework I want to enhance the importance of the self-regulation of the communities and the integration of customs and traditions into their communities.





THE LUHYA TRIBE (Bukusu and Wanga are subtribes)

Religion: Christianity and Animism

Population: 4,990,600

Location: The Luhya (or Baluyia as they call themselves) tribal homeland is located in western Kenya north of Lake Victoria from Kisumu to Webuye going north and south, and from Kapsabet on the east to the Uganda border on the west. This area of Kenya has been described as the most densely populated area of the world, exceeding even India in population density.

There are various migration traditions among the different Luhya groups. Some believe they migrated from Egypt, but as in most African tribes the land they lived and worked on were never identified as a country. The Luhya are classified as a Bantu people, based on their language. The name Bantu means "human beings." It appears that over a period of centuries, successive waves of Bantu speakers migrated into the area. There was thus a common underlying origin and language-culture base, but with diversity over the years. There are 18 sub-tribes of the Luhya in Kenya, one sub-tribe in northern Tanzania and 4 in Uganda. The Luhya call these groups "houses" of the Luhya. Tradition and linguistic characteristics of the various sub-groups indicate that various small groups of Bantu-speaking peoples settled over a period in these areas. They developed a political unity during the latter stages of the colonial period.

Throughout the early years of living in this region, they were at war with their Nilotic neighbours, the Teso, Nandi, Maasai and Luo. Records of these wars date back to the 1750s. Despite this enmity, many Luhya families have intermarried over long periods with the neighbouring Luo, which underlines the long tradition of intermarriage of different tribes in the area and also explains the similarities in customs and traditions.

It is common to find Luo, Turkana and other names among the Luhya. They Luhya are agricultural people living mostly off the land. The western Kenya area is rich, fertile highland soil. In recent years many of the

youths have gone to the cities in search of work and a better life, however they are still extremely tied to tribal traditions and superstitions which is also seen inside the camps.

The boys were given the responsibility of seeing after the herds and keeping the fire burning at night. The girls helped their mothers in the fields and in food preparation. Circumcision for males and females was practiced. There was once a period of training for adult responsibilities for the youth. Circumcision is now often done in hospitals and the traditional training has basically died out. This strongly indicates the extent to which tribal customs have changed over the last century. The Luhya have extensive customs surrounding death. From tradition they have a great celebration at the home place of the deceased hosting dozens to hundreds of people for a period of 40 days. Nowadays, there is often a shorter (1 week or so) celebration at the time of burial, then a single closing ceremony again to end the 40 days. This had developed because so many Luhya working in Nairobi must return to jobs rather than staying at the home place for 40 days. Christianity was first introduced among the Luhya around 1902 by a missionary at Kaimosi. That same year the Catholic order Mill Hill Brothers came to the area of Mumias. The Church of God of Anderson, Indiana, USA, arrived in 1905 and began work in Kima. Other Christian groups such as the Anglicans (CMS) came in 1906. In 1924 the Pentecostal Assemblies of Canada began their work in Nyan'gore. The Salvation Army came to Malakisi in 1936. The Baptists came to western Kenya in the early 1960s. Various sources estimate that Luhya are 75-90% professing Christians. This, of course is not surprising when you consider the amount of people that wanted to convert the inhabitants into Christians. Eventually this transition had major effects on the communities. The families used to live polygamously and often one household had 2 to 5 wives. With the introduction of Christianity and their monogamy the family composition and more important and the family compound organization had to change. The extended family compounds changed into smaller denser compositions (picture example Pokot with current). The Luhya people became a politico-cultural bloc during the colonial period moving toward independence. They are at peace with their neighbours at the present time, although during most elections there were disturbances and open conflicts with different other tribes. In Kenya this is a normal phenomenon because of the disharmony the British left. The Luhya are one of the top three tribes in number in Kenya, the Luhya influence politics greatly, especially in larger cities such as Nairobi. But after the colonial times the British left the Kikuyu tribe in charge of the country. This tribe had worked for the British during

the dark ages of Africa as slave makers. The British considered the Kikuyu as the most violent and intelligent tribe available in Eastern Kenya and were appointed for the dirty work of many of the colonial occupiers. Today the Kikuyu still have high positions in the Kenyan government, local government, police and army (prove). Which at this moment is one of the main causes for the intertribal clashes, which we have witnessed in 2004, 2008 and are again predicted for the upcoming elections of 2012.



Religion: Christianity and Animism

Population: 340,000

Location: They inhabit the Turkana District in northwest Kenya, a dry and hot region bordering Lake Turkana in the east. They refer to their land as Turkan.

South of Turkana live the Pokot (Pökoot), Rendille, and Samburu. The language of the Turkana, an Eastern Nilotic language, is also called Turkana; their own name for it is Ng'aturk(w)ana or nga Turkana.

The Turkana People call themselves Ngi Turkana. They are mainly nomadic pastoralists. The Turkana were known for raising camels and weaving baskets. In their oral traditions they designated themselves as the people of the grey bull, after the Zebu, the domestication of which played an important role in their history.

They are believed to have originated from North Africa and across the Red Sea. They are a conservative ethnic group with strict cultural lifestyle. The exact number of The Turkana People is not known. Available population statistics are estimates, mainly by the Kenya Government. The unreliable population estimates are as a result of marginalization in governance process, delimitation of Turkana land which places some sections of Turkan in Uganda, Sudan and Ethiopia and cultural prohibition for physical counting of people. The delimitation of tribes is one of the other main cultural impacts on African tribes. The division of area's into countries by the west for the search of commodities often sliced tribes into several parts.

Traditionally, men and women both use to wear wraps made of rectangular woven material. These days these cloths are purchased, having been manufactured in Nairobi or elsewhere in Kenya. Each sex adorns themselves with different objects. Often men wear their wraps similar to tunics, often with one end connected with the other end over the right shoulder, and carry wrist knives made of steel and goat hide. Men also carry stools (known









as ekicholong) and will use these for simple chairs rather than sitting on the hot midday sand. These stools also double as headrests, keeping one's head elevated from the sand, and protecting any ceremonial head decorations from being damaged.

It is also not uncommon for men to carry several staves; one is used for walking and balance when carrying loads; the other, usually slimmer and longer, is used to prod livestock during herding activities. Women will customarily wear necklaces, and will shave their hair completely which often has beads attached to the loose ends of hair. Men wear their hair shaved. Women wear 2 pieces of cloth, one being wrapped around the waist while the other covers the top. Traditionally leather wraps covered with ostrich egg shell beads were the norm for women's undergarments, though these are now uncommon in many areas. The Turkana people have elaborate clothing and adornment styles. Clothing is used to distinguish between age groups, development stages, occasions and status of individuals or groups in the Turkana community.

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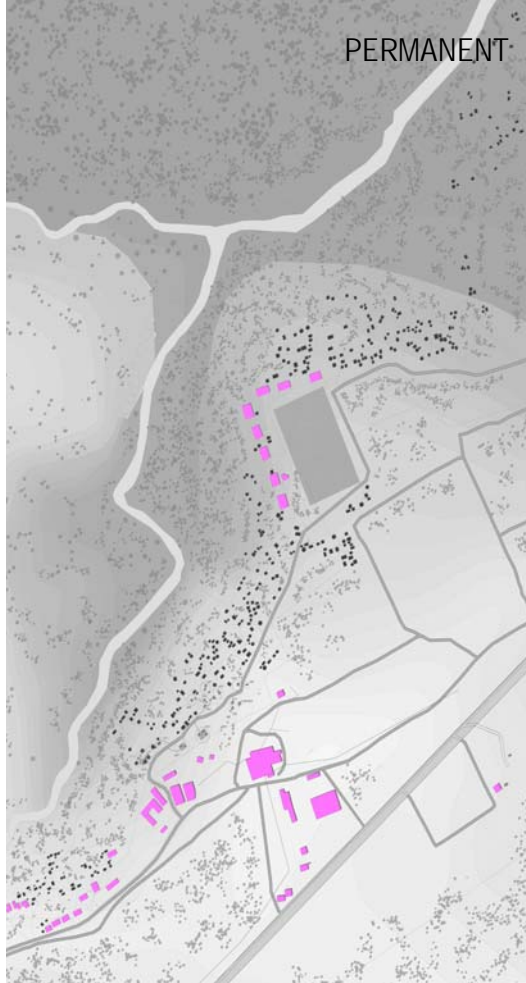
Livestock is an important aspect of Turkana culture. Goats, camels, donkeys and zebu are the primary herd stock utilized by the Turkana people. In this society, livestock functions not only as a milk and meat producer, but as form of currency used for bride-price negotiations and dowries. Often, a young man will be given a single goat with which to start a herd, and he will accumulate more via animal husbandry. In turn, once he has accumulated sufficient livestock, these animals will be used to negotiate for wives. It is not uncommon for Turkana men to lead polygamous lifestyles, since livestock wealth will determine the number of wives each can negotiate for and support. This days due to inter marriage with other clans, the Turkana have adopted other forms of cultures like circumcision which was adopted among the Turkana from Isiolo district.

Turkana rely on their animals for milk, meat and blood. Wild fruits gathered by women from the bushes and cooked for 12 hours. Slaughtered goats are roasted on a fire and only their entrails and skin removed. Roasting meat is a favourite way of consuming meat. The Turkana often traded with the Pokot for maize and beans, Marakwet for Tobbacco and Maasai for maize and vegetables. The Turkana buy tea from the towns and make milk tea. In the morning people eat maize porridge with milk, while for lunch and dinner they eat plain maize porridge with a stew. Zebu are only eaten during festivals while goat is consumed more frequently. Fish is taboo for some of the Turkana clans. Men often go hunting to catch dik dik, wildebeast, wild pig, antelope, marsh deer, hare and many more.

Houses are constructed over a wooden framework of domed saplings on which grass is thatched and lashed on. The house is large enough to house a family of six. Usually during the wet season they are elongated and covered with cow dung. Animals are kept in a brush wood pen. Due to changes in the climatic conditions most Turkana have started changing from the traditional method of herding cattle to agriculture.





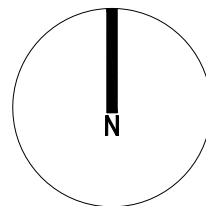


PERMANENT

STRUCTURES

PERMANENT VS. TEMPORARY STRUCTURES

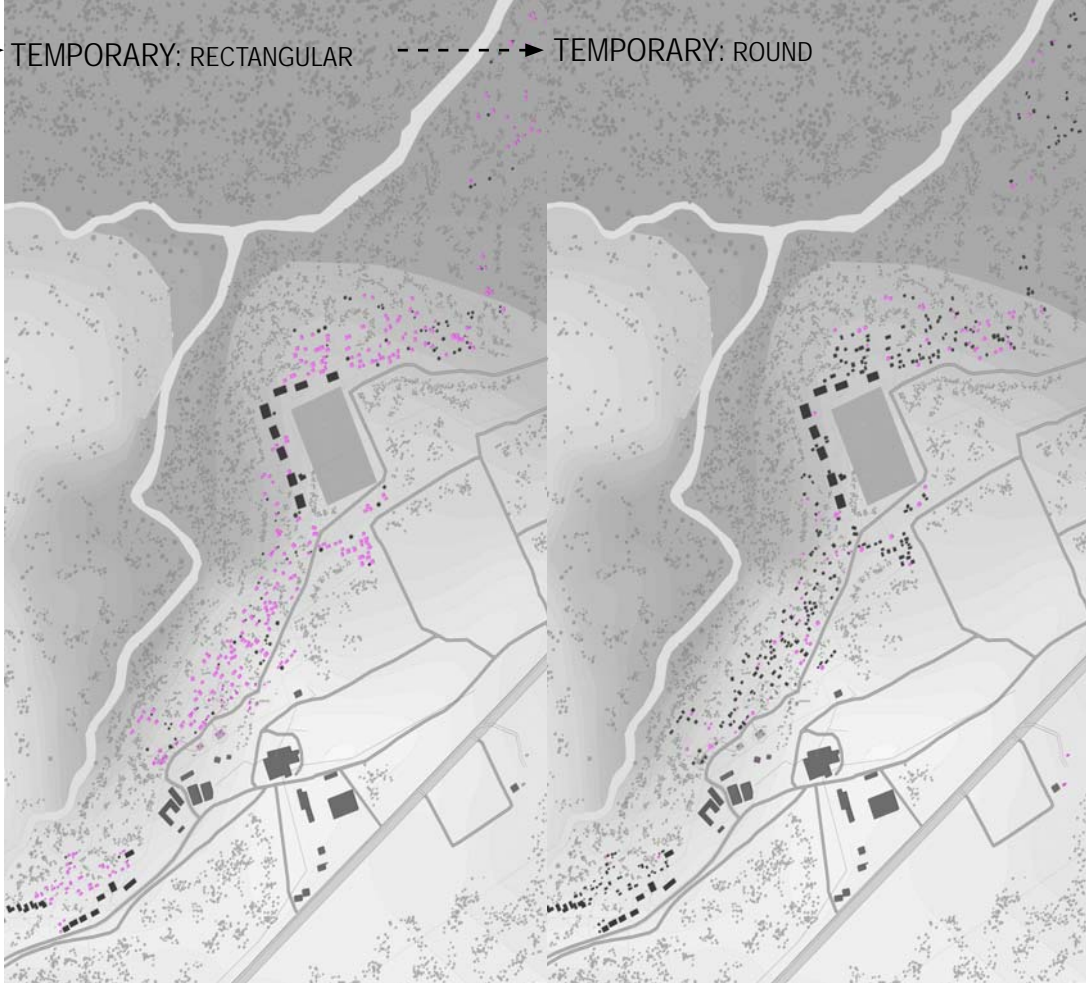
On the images on the left pages all permanent and temporary structures are shown. The last important physical element I would like to show is what the percentages of both groups are. It becomes clear that the camps and their temporary structures are overgrowing the camp farm structures. Although the area is farm property, people are taking over more and more ground from the farmer. It is not being done by force but the inhabitants slowly naturally overgrow the farm. This might also be a good reason for the farmer to change plans.

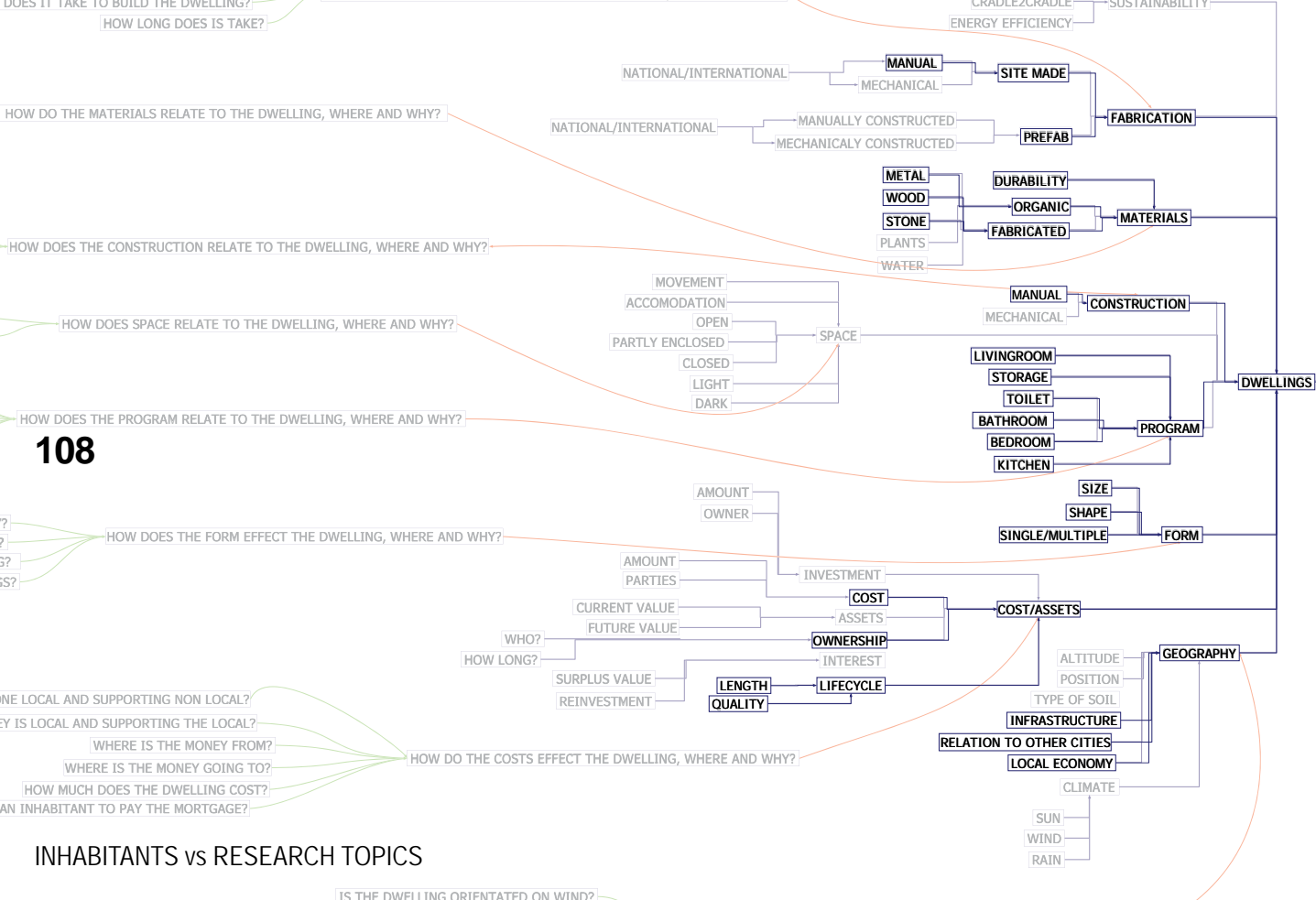


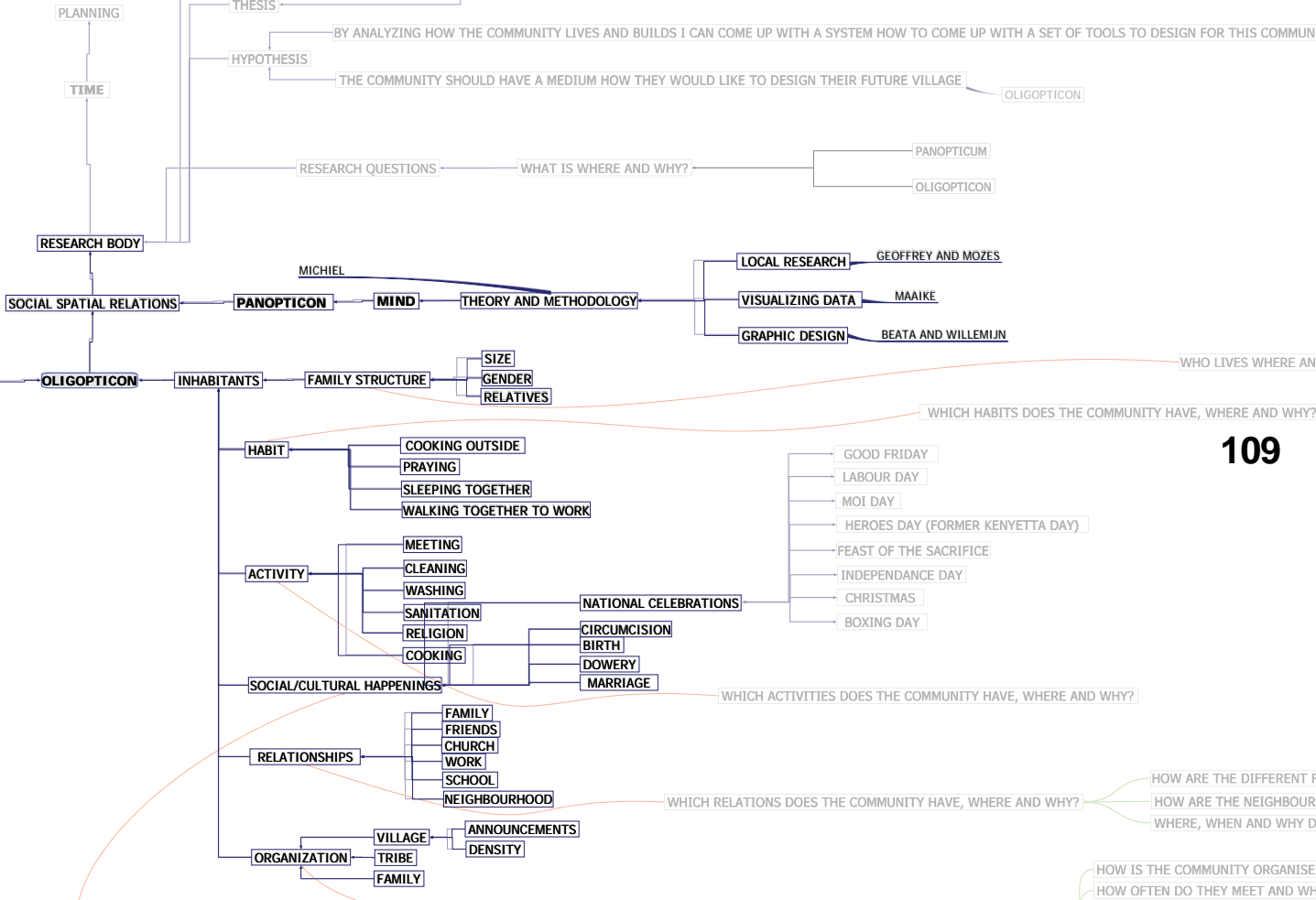
niveau 0

TEMPORARY: RECTANGULAR

TEMPORARY: ROUND







DURABILITY

MANUAL

SIZE

TOILET

RELATIVES

BATHROOM

COOKING OUTSIDE

KITCHEN

MULTIPLE

WASHING

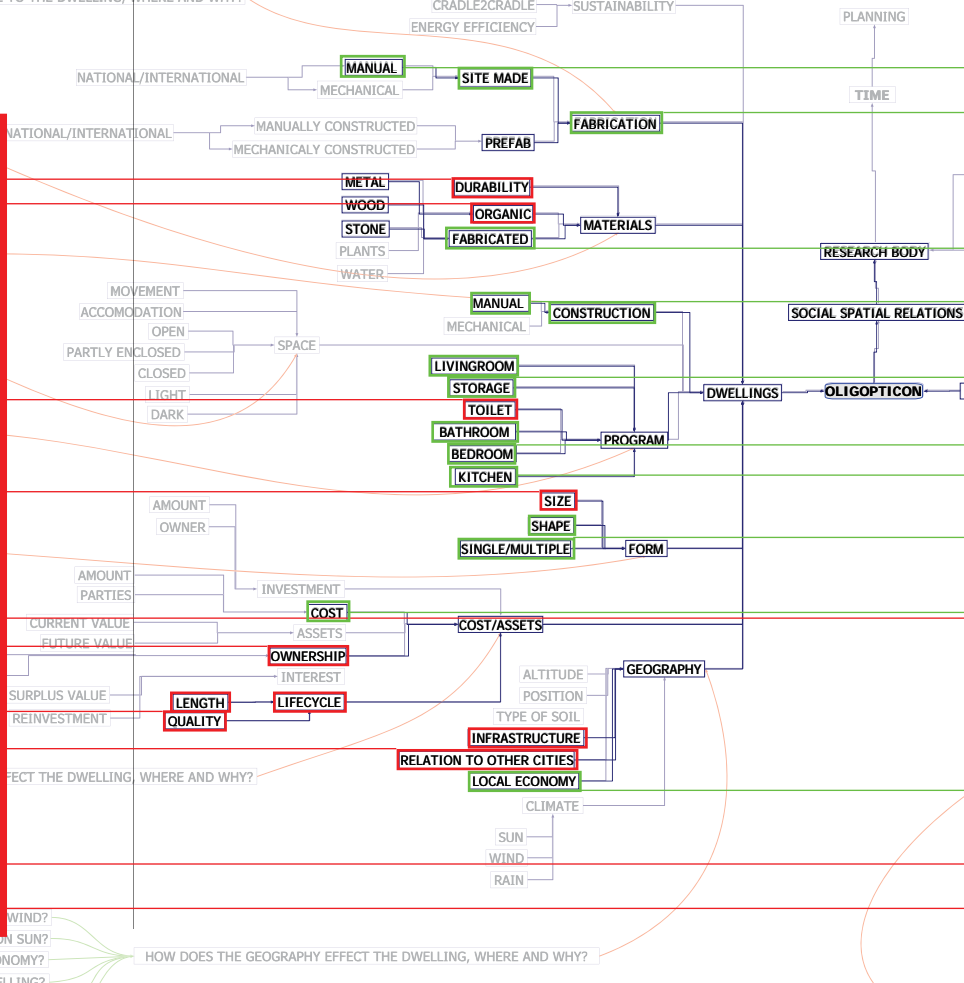
SANITATION

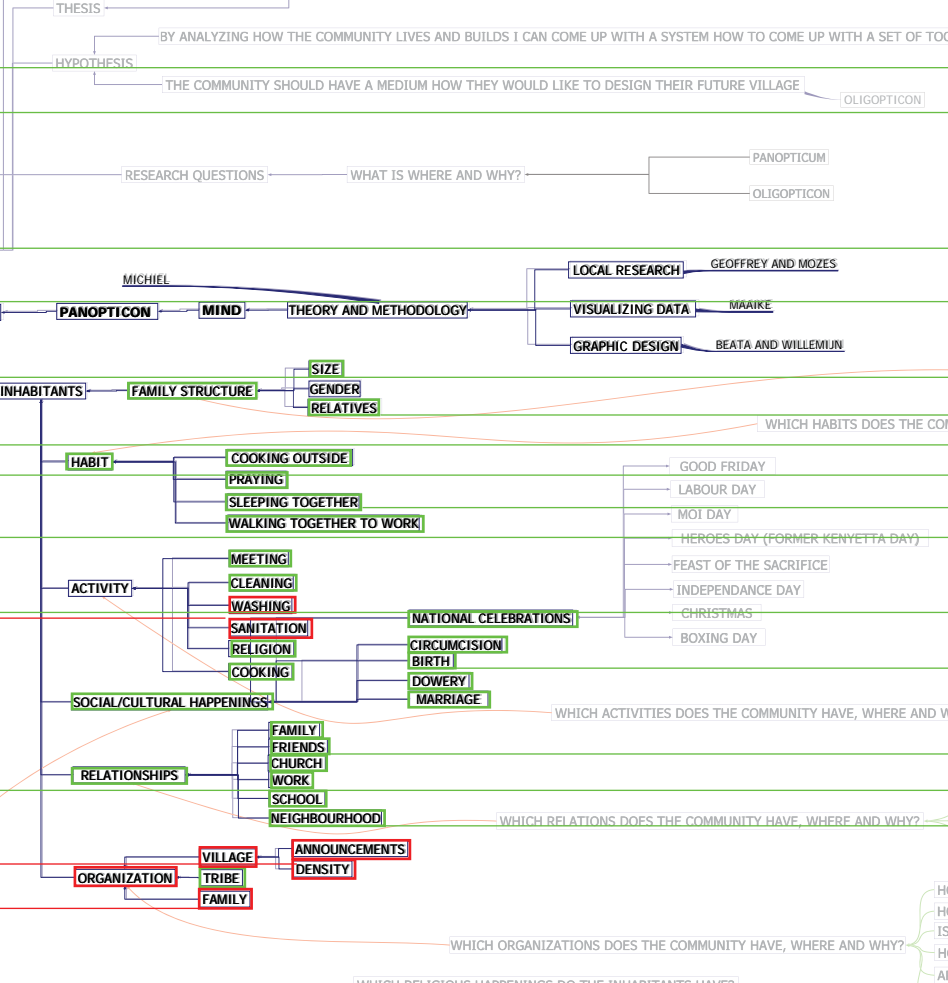
POSITION

INFRASTRUCTURE

COOKING

DENSITY





DURABILITY

MECHANICAL LIVING ROOM

BEDROOM

SIZE

SHAPE

COSTS

RELIGION

COOKING

HOW IS THE COMMUNITY ORGANISED? CHIEF? GROUP OF ELDER?

HOW OFTEN DO THEY MEET AND WHERE?

IS THE INDIVIDUAL HEARD?

HOW ARE THEY CHOSEN?

ARE THEY ALSO IMPORTANT INITIATORS IN HAPPENINGS?





THE INHABITANTS PERSPECTIVE

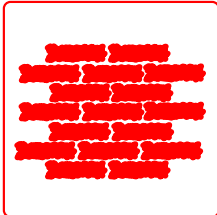
In this second part of the research we take a close look on what the inhabitants (everybody that lives in the camps of the farm) opinion is. What problems do the inhabitants see? What would they like to change about their living situation but also how and where they would like to do so? The inhabitants see great importance in the quality improvement of their dwelling and living situation but where does this opinion comes from? As described in the past pages many different methods and angles are used to catch the opinion of the inhabitants. Again I would like to mention that this research tries to grasp as much as it can but that we have to realize that at the end of the day the inhabitant only know and understand what they want. The overview of opinions that I am giving is only to show how much is forgotten, ignored or obstructed.

Eventually this research tries to communicate these issues in order to support the idea of self-regulating communities and act as a communicator between developer and inhabitants. It is important to note that all formulated factors are assumptions and based on my own experience. These factors don't want to communicate the truth. I only want to try to communicate what the inhabitants talked about during the last two years that I am working with and for them. The image on the left shows the group of children that often accompanied me on my fieldtrips and is taken inside the Lokobo I camp.



MATERIAL: durability

In the past the dwelling was built only from organic materials found in the direct surrounding of the dwelling. For the tribes that inhabit the camps it was natural that a dwelling would only last for a short period. The dwelling would die just as his inhabitant did. When the tribes resettled themselves the conditions and motives to build their house changed. Because of more opportunity for a job living near the farm the houses often shifted from owner and the economic value of the dwelling became reality. This is one of the reasons that people want to have a more durable dwelling than before, because then they can rent the dwelling to other inhabitants besides their family. In this light most inhabitants see vernacular architecture as something from the past and want to gain the same quality and status that some of the others already got.



- organic

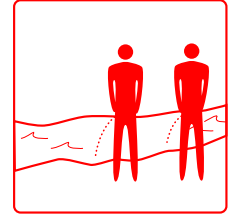
This subject has a lot to do with the durability of the dwelling and in practical point of view means that the inhabitants have to restore plaster and construction during live spent of the dwelling many times. But because the buildings' materials come straight from their surroundings, they are costless and applied easily. The contradiction in the whole thing is that they prefer organic material over mechanical produced materials for their price and availability but when it comes to durability and status they prefer mechanical produced materials. This is mainly due to the fact that they don't have to restore the dwelling often and that they can earn more money by renting the dwelling to others.





PROGRAM: toilet

From the cultural perspective people are used to walk into nature when they needed to use the bathroom. Most of the times just digging a small hole with their hands. This is still seen a lot inside the camps which causes one of the major problems. The inhabitants of the camps also really see the problem of this way of sanitation because of the bad smell around the camp. Because of the lack and bad state of toilets almost all inhabitants agree that sanitation is the most critical problem in the camps. When asked the inhabitants prefer a toilet over lowering the density. Another important point is that they don't want public toilets. They address the bad maintenance because of cultural differences. They are not used to sharing toilet facilities and are ashamed for using them. Which means that in future projects sanitation should be provided per family.



FORM: size

The size of the dwelling is never a problem for the inhabitants. They dimension their house to their personal need and if they have a family expansion or they need more space they simply build another structure on the family compound. For them this flexible way of living is ideal, simply because of the fact that you never know if a relative or friend needs a place to stay. In this way demand and offer is never an issue.





ACTIVITY: washing

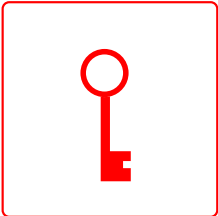
At the moment washing is one of the heaviest tasks in everyday life. The inhabitants have two options: wash clothes in the river or fetch water at one of the water points and wash at home. For an average wash of clothes per week at home mother and children have to walk at least 4 times up and down to get enough water. To wash in the river they only need to go twice up and down but takes twice as much time to get there. The inhabitants of the camps would prefer water pipes to their dwelling or to have water storage to collect rain water. But this has a major effect on where and when people meet during the day.

- cleaning



Cleanliness is a relative factor in the current households of the camps. All floors and walls are finished with mud and faeces and the roof is thatched. These materials are difficult to clean but in the opinion of the inhabitants sweeping is enough. This is quite revealing of the discrepancy between their and our categorizations of cleanliness. Another important aspect is that the faeces work as a repellent against mosquitoes and make the surfaces softer. This increases sitting and sleeping comfort because most people still sleep on woven mats on the floor.

COST: ownership



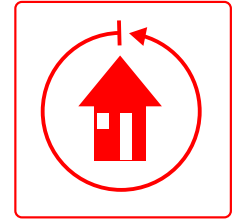
One of the biggest wishes of the inhabitants is ownership. They don't really own their current houses and the threat that they have to move makes them worried. Many of them are second or third generation inhabitants and lost the contact with their relatives in the village of heritage. These far related relatives still live in the villages where the first generation originated from. After all these years they still don't own a piece of land nor house they live in. For them the opportunity to own a piece of land (in the new camp) themselves is the change they have been waiting for.





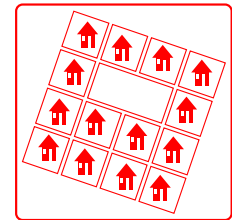
COST: lifecycle

As described under durability the community used to produce dwellings that wouldn't last longer than one generation. The dwelling was built only from organic materials found in the immediate surroundings of the dwelling. In the tribes that inhabit the camps it was natural that a dwelling would only last for one generation. From their culture a family dwelling should die with its owner. Only after many years when every mark of the past inhabitants and structures were gone were people able to build a new dwelling. They see materials like metal sheet as a solution that reduces the amount of maintenance of the dwelling. They would now prefer a dwelling that lasts longer and can be handed over from generation to generation.



ORGANIZATION: village

The camps have no planning for the dwellings and although they have a camp chairman, decisions are often made by the families themselves. Most of the inhabitants have a piece of claimed land. When they want to build an extra dwelling they can and will do so. This is all done without the interference of the community. Although people appreciate this freedom very much it's also causing the high density and the unregulated resettlement of the inhabitants. Most of the camp chairmen are actually more real-estate dealers. They often buy houses or pieces of land from families and sell them to the highest bidder or rent them. All of this wouldn't have been a problem when they would have lived in a typical self-regulated rural village.



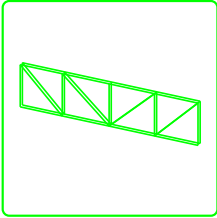


ORGANIZATION: density

Just like the farm owners, the inhabitants see the density as a problem. Not because of the poor living conditions, because they are used to this way of living and don't have a problem with it. They see the problem in the amount of new dwellings being constructed in the last years. Most families have not more than three dwellings, the problem in their point of view lies in the fact that most camp inhabitants don't work on the farm.



NEGATIVE
POSITIVE



MATERIAL: fabricated

For the inhabitants the choice between organic and fabricated is easy. They would prefer to have fabricated materials which are easy to clean and look nice. The only reasons that they don't apply them are costs and transportation. Because they live in a remote area it is hard to get these materials on site and because shops are scarce it becomes an expensive solution. Some of the inhabitants have iron sheets and a concrete floor which makes them very proud. Thatched roofs and mud floors are for the poor people and is something from the past that they want to get rid of.



CONSTRUCTION: manual

Most of the inhabitants have been building houses since they were little kids and learned it from their grandparents. It's a part of their culture to build houses themselves and given the option they would continue this practice. A new building system that they can make and build themselves is preferred. But they know that current new building methods are difficult and need professionals to be executed, which is also the reason that new houses are so expensive.

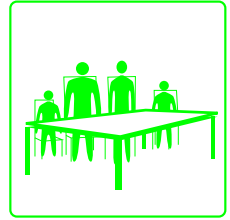




PROGRAM: living room and storage

The current houses of the camps consist only of one room which is for living, sleeping, storage, etc. Most of the families have divided the program over different structures but still the structures don't have any interior walls.

Every household has a family house (a place where the parents and small children sleep), while the rest of the family and functions are divided over the different structures. Separation between living room and bedroom is only created by a curtain. The inhabitants build these dwellings themselves so the dimension and position of the program suits their wishes and demands.



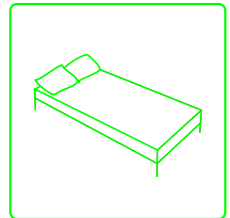
- bathroom

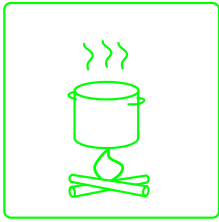
The self-made light structures just behind their dwelling suit the inhabitants perfectly. They only use a small amount of water for washing themselves which is absorbed easily through the soil. They only need a light separation for privacy if there is not a spot on the compound that offers them enough privacy.



- bedroom

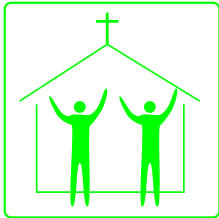
Most of the families sleep on the ground and thereby offer enough space for everybody. The children are separated by a curtain from their parents and if expansion is needed they just move the curtain. They are pleased with the bedroom as it is, but they would prefer more privacy for the parents.





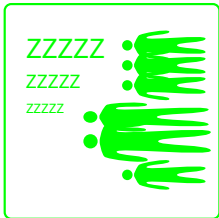
PROGRAM: kitchen

All inhabitants cook on open fire, 60% of them cook outside. Some of inhabitants have temporary structures where they cook. These structures differ from a small thatched roof to a whole built structure. The other 40% cooks inside the family house or has a separate kitchen structure. Open fire cooking carries a lot of risk because of the fire hazard. Almost all the inhabitants use firewood because charcoal is too expensive and firewood is just cheaper and faster collected.



HABIT: praying

One of the most important performed social cultural values of the inhabitants at this moment is their religion. Almost all of them are Christians and have church communities divided over the camps. Some of the inhabitants that want to go to church through the week but don't want to take the long hike to town go to small chapels inside the camps. In actuality, these chapels are just regular dwellings where the little church communities come together after work to sing and pray. Religion is the most social aspect in their perspective but makes you wonder how much that relates to their former religion.



- sleeping together

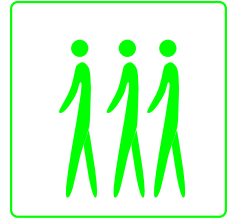
Traditionally, children up to 8 years old sleep with their parents in the same dwelling. In the eyes of both parents and children this is considered normal and not a problem. However, some of the parents would prefer a physical separation inside the dwelling between them and their children. They would prefer different bedrooms divided by walls even if they will lose flexibility.





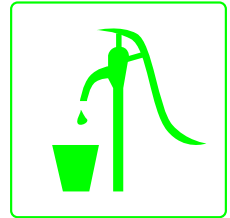
- walking to work together

Although infrastructure is missing in the camps, certain routes were just cut through the years. In this way the infrastructure offers the shortest way and is adapted to the people and not the other way around. During rainy seasons the roads can be terrible but the self-grown network offers the best connectivity. There is one main road that offers the best trail through the camps. Almost all of the inhabitants and even people from outside the camps (Uganda) use this road to go to work. Walking down the road the different workers and children pick each other up and move as a group towards their work and schools.



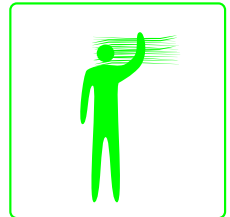
- fetching water

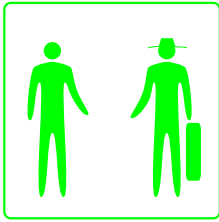
Another difficult point is the social/practical point of view. Fetching water is in practical point of view a real burden for the women of the camps. Women and children (girls) are responsible for carrying the water sometimes over an extremely long distance. There are two water collection points so it depends on the position of the dwelling. But the water collection points are also a meeting place for women, boys and girls. Before and after school/work water fetching is being done and most of the time this is a moment to have some small talk.



- finding wood for fire

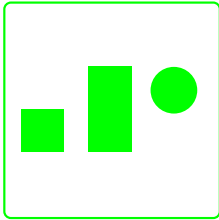
Most of the time this is performed by children of the family. After school most of the children are sent to collect or buy firewood in the surroundings. It's simple, cheap and again it is a social activity for the children. This is just part of their daily chores.





HABIT: relatives

From a cultural and practical point of view the inhabitants really value their relatives and their possible added value to the household. Although most of the time the relatives don't have a job they can be very useful for the family such as by taking over everyday chores or working on the shamba (agricultural land) of the family.



FORM: shape

In the current camps of the farm there is a wide differentiation in sizes and shapes. Main forms are square, rectangular and circular. Most of the time the shape of the house still comes from the tribes origin of inhabitancy. Every village and tribe has his own size and shape of dwelling. The reason that the shape still differentiates is that the second and third generations still build their houses after their parents' examples. At this moment people have free choice and individual interpretation of the size and shape they want for their dwellings.



- single/multiple

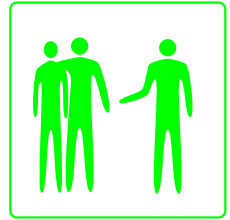
For the inhabitants the tradition of adding dwellings whenever is needed is more than just functional. Whenever a relative needs a place to stay or a son becomes a man they just erect a dwelling. For the inhabitants this is just everyday practice and is very much appreciated. In this way the compound can grow or shrink with the family.





Most of the inhabitants' social lives take place just outside the dwelling. A lot of the family life is performed in the common space between the different structures on the family compound. Children and parents often meet and eat in the central place of the compound. Because this is just out in the open air there is a lot of transparency towards the other inhabitants. Another large part of meeting is done during the normal chores of the day.

ACTIVITY: meeting



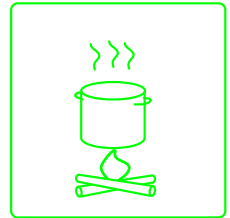
- religion

In the region there are many churches available and many people come all the way from Uganda for Sunday mass in Chepchoina (500 meters from the farm). Because of the positive location of the farm being the nearest to the border, the farm wants to build a large church so not only the workers but a vast amount of people of the region can join in. The owners are religious themselves to and they want to support the religious bounding of the community as much as possible. The community itself prefers a church for themselves close to home.

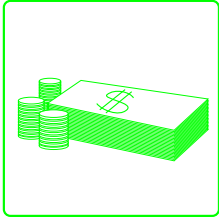


- cooking

All inhabitants cook on open fire, 60% of them cook outside. Some of inhabitants have temporary structures where they cook. These structures differ from a small thatched roof to a whole built structure. The other 40% cook inside the family house or has a separate kitchen structure. Open fire cooking carries a lot of risk because of the fire hazard. Almost all the inhabitants use firewood because charcoal is too expensive and firewood is just cheaper and faster collected.

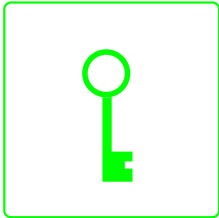


COSTS: amount



Of course the owners don't deny the extremely low cost of the current dwellings of the camps but to gain a higher quality of life there is no other way than to invest. The aim of the first phase of the project is to provide 90 families working for the farm and 20 families from the region with 1000 square meters of land, a family house, a toilet and a bathroom. This all for only 150.000 Ksh (1500 euro). This amount was calculated on what an average worker is earning and the time he or she will need to pay the whole amount back to the farms trust. On average it should be paid off after 7 or 8 years. The mortgage will be held in from their monthly salary.

- owner



For the owners of the farm, ownership is a positive point. Because these people just started to live wherever they want without payment the farm is still the owner of the land and the structures on it. This means that they can resettle or remove people as they please. For the future houses the inhabitants will gain ownership of land and structures, which is in the view of the farm a positive solution. Because the inhabitants are the owners they will take better care of their house and land.

SOCIAL CULTURAL ACTIVITIES: national celebrations



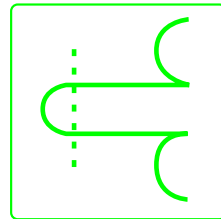
Just like every culture it is normal that the inhabitants of the camps have their own traditions and celebrations. There is a wide range of activities and places where these take place. Most of the national celebrations are celebrated only in schools. Only on a few occasions do adults have a day off, here the celebration is not really different from western society and is being celebrated within the family itself.





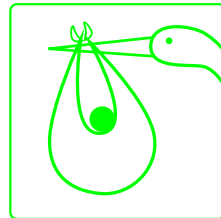
SOCIAL CULTURAL ACTIVITIES: circumcision

Circumcision is a completely different thing. This celebration is only performed with a group of boys (girls circumcision is not performed anymore) when there is enough money for the celebration. During a couple of days this transition to manhood is celebrated. On the last day the whole camp and relatives join in for the big event which is performed the next morning. During the last night this event is celebrated on a large open space somewhere central in the village (currently performed on the soccer field of the camps). This celebration is still a crucial event and is necessary to be socially accepted as a man inside the camps. Whoever is not circumcised won't be able to marry. Most of the inhabitants claim it as unacceptable.



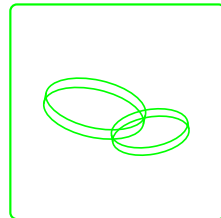
- birth and dowry

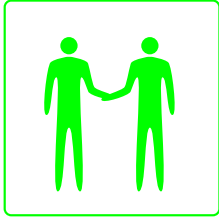
These celebrations are again very much related to western society and are celebrated for just a small group of people inside the family compound. Only relatives or invited friends will be part of the celebration.



- marriage

From tradition women are still bought by cows and or money. The amount is set on the dowry and has to be paid at the wedding. The location and amount of guests for the celebration depends on the welfare of the family and can be held inside a school or just in the open air. Most of the inhabitants marry under customary law which is not always legit. To marry officially by law a contract has to be signed at the DC's office in Chepchoina. Most people also marry for the church which is in most cases also performed in Chepchoina.





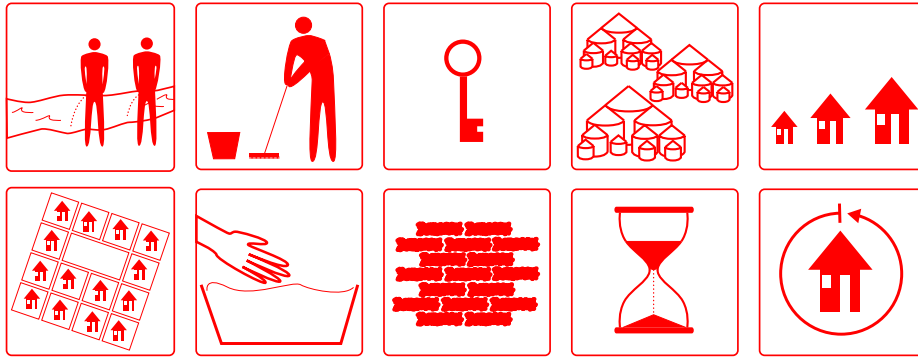
RELATIONSHIPS:

family, friends, church, work, school, neighbourhood

In the camps there is a very complex structure of friends, family, etc. The inhabitants know that in the new planning these structures are ignored and a lot of them are worried they will lose a good neighbour. In some cases this relation is built from years of living next to each other or simply being family. The inhabitants would prefer to be able to communicate how and with whom they would like to be transferred to the next camp.

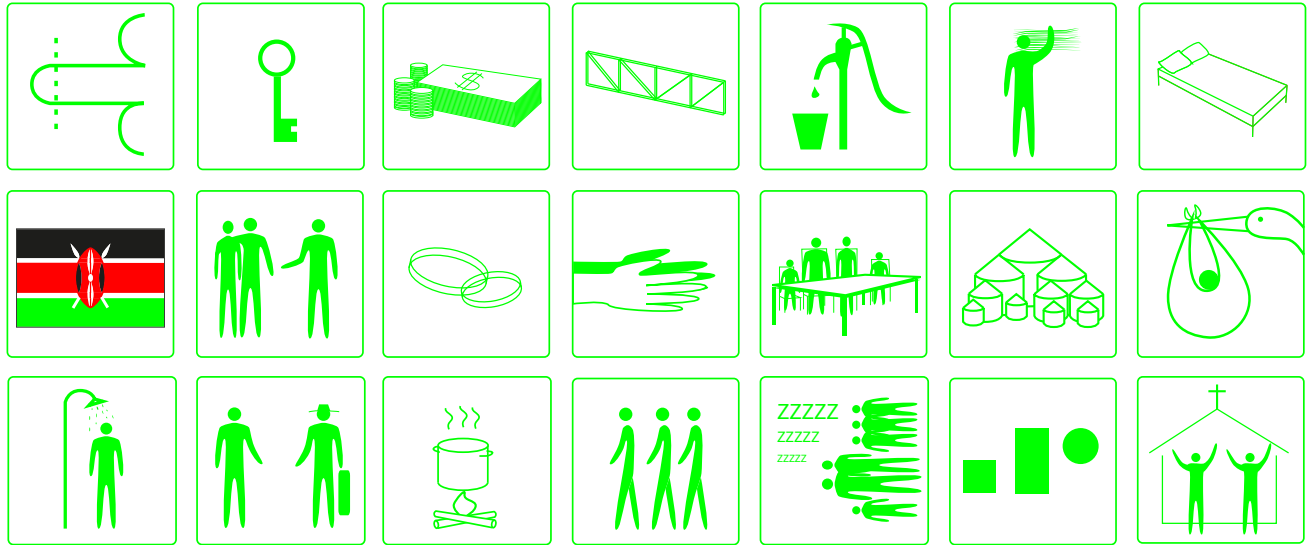






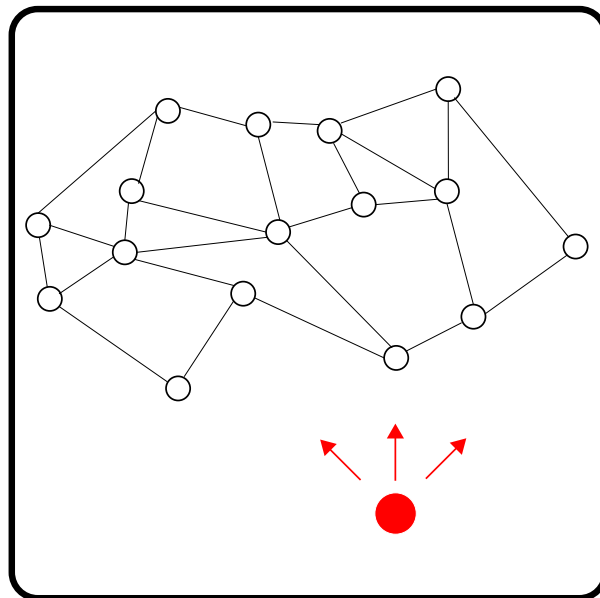
CONCLUSION

In general the inhabitants see most values positively. Again I would like to mention that part I&II are both written from my personal perspective. All values mentioned in these parts are assumptions and only intend to convey a general notion of the developer and inhabitants' perspectives. Although I based these values on years of working together with inhabitants and developers, interviews, etc. we have to keep in mind that it's nearly impossible for an outsider to grasp everything. It is not my intention to pretend I have all the answers and to design on a self-formulated program and strategy. At the end part I&II are meant to give



handlebars to grasp the positive and negative aspects of the current development. Eventually I would like to write a scenario where the community develops itself but with participation in the dialogues of the developer in the developing process. Part III of this research deals with the formulation of a solution based on comparing perspectives of the habitants and the developers.

MY OWN PERSPECTIVE



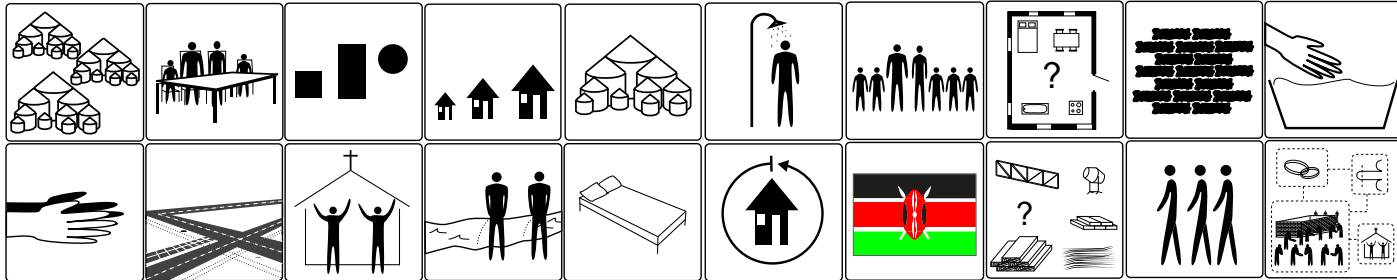
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INTRODUCTION

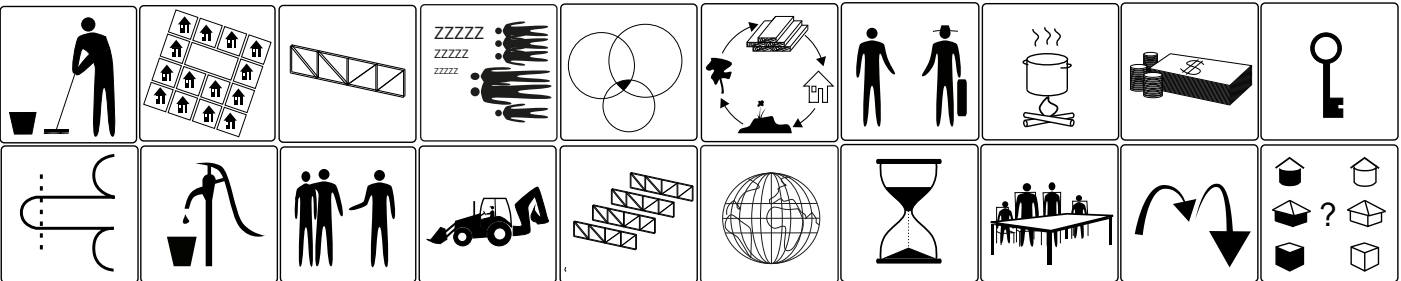
The last part of the research is an comparison between the contradictions and similarities between the issues that were stated by the developers and inhabitants. In the current development a lot of restrictions and rules are formulated to organize the inhabitants. This will cause major friction and problems in the future and should be prevented. As this research is meant to function as an communicator between inhabitants and developers, guidelines will have to be formulated. Guidelines that will help during the upcoming years of development on Mount Elgon.

To add relevant issues all the important issues of the research topics that were left unmentioned in part I&II will be included in this last chapter. Taking a look at the full research topics will show that a lot of issues that are crucial for the development process should be explained and translated into guidelines. Once more from these different issues development guidelines will be derived and used in a scenario that could provide the inhabitants and developers with a possible solution.

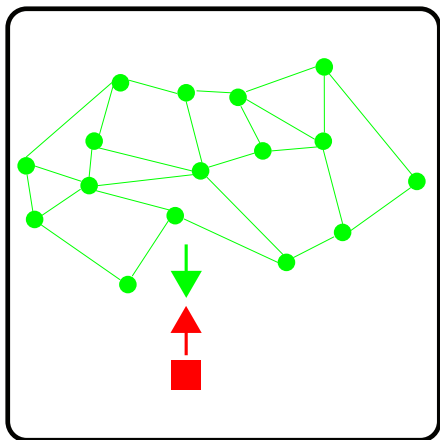
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Not all unmentioned issues of the research topics are equally important, therefore a hierarchy of importance in the different subjects should be made. For example, where the dwelling construction is built is not as important if the program of the new dwellings is based on the wishes of the farm. Therefore the subjects placed in grey are the least important and in red are the most important subjects to be mentioned. The subjects marked in blue should be explained as much as possible. Eventually one must aim to include every single aspect of the development but should accept that the amount to be mentioned at the moment is limited by the timeframe of this graduation.

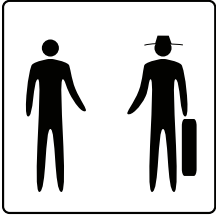


CONTRADICTIONS



Comparison of parts I&II shows that certain subjects that the inhabitants see as positive the developers see as negative. This means that they don't agree on the issue and that a solution should be formulated to tackle the distance between both sides. In the first chapter of part III these contradictions will be explained.

CUSTOMS: relative



This is one of the most difficult subjects to be dealt with. It's one of cultural habits that the developers see as one of the causes of the bad living conditions inside the camps. But it is important to separate cause and consequence in this manner. The reason that people started to invite more and more relatives into the camp is because of the better possibilities the farm had to offer. It is important to note that the farm is the biggest employer of the region and is well known for the effort the farm is taking to improve the living situation of their workers. Besides that it is a custom to Kenyans tradition that if a relative doesn't have a place to live or doesn't have a job other family members in better conditions offer him a place in their own family compound.

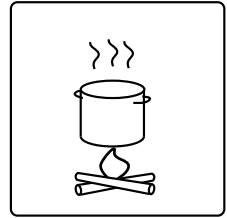
In the camps there is not a limit of people that can be invited because of the lack of cultural regulation. In the traditional way of living if they wanted to invite a relative or friend this would have to be discussed by the community. The community would eventually decide if somebody was allowed to become a part of the community. In the current camps this regulation by community is lost and certain people take advantage of this situation. The developers want to regulate this by limiting the amount of space available per family. This, in cultural point view is a cultural limitation and something you can't decide for a group of people. The most obvious way of solving the problem is by reinstating the community principle, with a board and chairman.

→ Development guidelines:

- Reinstatement of community principle (community board and chairman) to regulate the flow of inhabitants and their relatives.

ACTIVITY: cooking

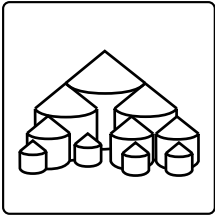
The inhabitants always cooked outside which has numerous reasons. The fact is that open fire cooking is a problem because of the fire hazard in the eyes of the developers. For this reason they want to provide a kitchen inside the new dwellings. But even inside the camps it's difficult to see many examples of people cooking inside their family dwelling. Again the question arises if the developers should make this type of decisions for the inhabitants. Will the inhabitants actually use the inside kitchen? And if they would make small fires outside because they want to, how would you restrict them from doing so? This decision should be left to the inhabitants themselves. I would like to suggest that in new plans we provide the inhabitants with a system that they can build a chimney easily and cheap so that they can put it wherever they want. Or perhaps show two possibilities, one for an outside kitchen and the other one for indoor. Another aspect is that adult children are not allowed to cook in the mother's kitchen. Which means that one chimney won't be enough for a family. So we should also consider the fact of multiple chimneys or cooking area's and differ them in size.



Development guidelines: ←

- Provide a chimney system that is easy and cheap to build and also offers a low use of firewood and might also be used for internal heating.
- Make a proposal of different types and sizes of chimney and show possible positions on the compound.

FORM: single multiple



As already described in part II of the research the general minimum amount of dwellings used per family is three. Traditionally adult children have to start living in their own dwelling, this starts when they reach an age of 5/6 years old. Although men and women have different tasks in the construction process it is still a family task to make the dwelling together. In this children learn how to be self-sufficient in the safe borders of the family compound. When the family is larger than 6 children, they will exchange the knowledge amongst each other. In any case, if the family needs to expand the dwelling for their children or relatives structures are added. The dwelling proposed by the developers is a single dwelling. Which means that in cultural sense the children can't build a separate dwelling on the family compound any more. Again, the developers decide to change a major part in the way of life for the inhabitants. Similar to the allowance of relatives, the family expansion should be arranged by the community itself. It is understandable that the developers want to have some way of controlling a maximum amount of dwellings per compound. I want to propose this maximum amount and how the community can communicate expansions to the developers. So the decision remains with the inhabitants but is registered and guided into a normal density for a village.

→ Development guidelines:

- Set maximum amount of extensions to a family house (should not exceed the norm of 20-25%, based on plot size and the amount of horticulture needed per person)
- Set a border for development area on plot (the rest is meant as horticulture ground)
- Reinstate community principle to communicate additions to developers.







PROGRAM: bathroom

The inhabitants are accustomed to washing themselves behind one of the family dwellings. In their point of view a shower is unnecessary. They will create a structure when there is no available space to have some privacy. In the new plan a shower is added to a sanitation unit quite far from the family dwelling. There are other examples in the region where sanitation was provided people started to build shower units just next to or behind the house. Again the decisions that the developers make does not apply to the wishes that the inhabitants have. My suggestion is to allow the self-build shacks to wash themselves, but as an alternative also design a possibility in the dwelling itself.



Development guidelines: ←

- Allow the temporary shower units (there is no possible objection to the units)
- Position the shower or drainage tube close to a possible vegetable garden or if not possible to main drainage pipe of the village.
- Provide the new habitation with the possibility to have a shower inside the house.



CONSTRUCTION: manual

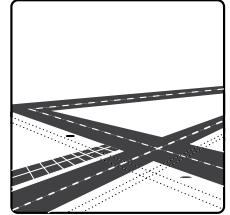
Inside the camps the houses are being built by a traditional construction method that has been used for centuries and is transferred to every new generation. Materials used are local and applied by hand. This makes the construction of the dwellings extremely cheap for the owners to erect. Side effect is that the dwellings are not that durable and in the eyes of the developers should be built mechanically to provide the inhabitants with a proper and long lasting dwelling. In this way the cultural background and traditions are ignored and forgotten. I would like to suggest that every new development that is initiated should be built by the community itself and should only be built in a method that's as close as possible to the traditional used one.

→ Development guidelines:

- Let the community build themselves
- Use a method that is close to the traditional used one

GEOGRAPHY: infrastructure

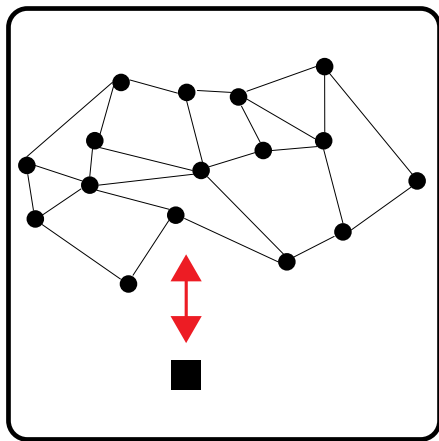
All paths inside the camps are formed by the usage of the inhabitants. This is carved into the soil by decades of intense use. Most paths are simply based on the shortest and most flat route to get from A to B which - in terms of the developers - is something that is creating a chaotic situation of trespassing and such. To make the area more controllable they want to introduce a rational grid of paved road. Again, it is against the nature of the user. In my point of view these informal roads are essential for the homogeneity of the communities. It sets a certain principle of trust and social control, but more important it acts as a communicator between the family and the public space, which are just a few of the most essential aspects for the homogeneity of a community.



Development guidelines: ←

- Leave the formation of main roads to the inhabitants or make a case study on the most obvious routes that were established by the inhabitants in the camps.
- The informal infrastructure inside the communities should be formed by the communities themselves, based on agreements they make with each other.

SIMILARITIES



Comparison of parts I&II shows that certain subjects are interpreted as positive by both the inhabitants and the developers. This means that they agree on the issue and that it could be directly used in a new development project.

MATERIAL: durability

Developers

In part I&II of the research it becomes clear that both developers as inhabitants prefer a dwelling that is built from longer lasting materials. The developers note that a more durable mechanical made product will increase the dwelling quality and maintenance. Although the developers have the best intentions we could ask ourselves if the inhabitants really benefit from these expensive materials that are unknown to their current construction culture. The aim of the developers should be to provide everyone with a proper dwelling instead of only providing a selected group of inhabitants with a proper dwelling.



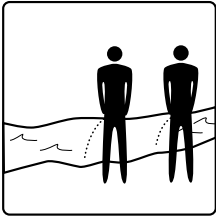
Inhabitants

The inhabitants note that they prefer a dwelling that is built from longer lasting materials. An important issue to notice in this part is that the inhabitants relate durable products to status. But this means that only the richer inhabitants can provide themselves with these materials. For instance, corrugated iron sheets. Most of them inside the camps are filled with holes and radiate a lot of heat during the day. Although the bad features the inhabitants still prefer this way of roofing. This underlines that already in these communities the inhabitants are becoming sensitive to status related objects.

The roofing sheets could, for instance be compared with a new car in the western world. So the materials used indicate the wealth of a family. In the past this wasn't available and external decoration was limited to painting. Instead I would like to oppose that local produced materials with enhanced durability can also provide the community with improved dwellings. These materials would be cheap and still communicate the local identity. Besides that if the materials can be made locally and are cheap to produce the dwelling doesn't have to last longer than 80 years. This durability of the dwelling has been used for centuries. The only complaints people have is that they have to patch the walls and floors, but also that surfaces are hard to clean.

Development guidelines: ←

- Durability of materials should not be searched in mechanical produced products but in local produced materials with enhanced durability.
- The family dwelling will not have to be able to last longer than 80 years.
- Materials should be searched that do not need a lot of maintenance and are easy to clean.



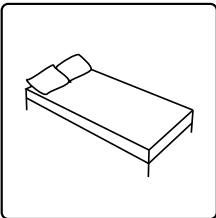
PROGRAM: toilet

Inhabitants as well as developers agree on the type and position of sanitation units. Which should be placed outside the family home. Also confirmed by the demography figures most households even in urban area's use pit latrines (up to 75%). Which means that proposed typology of toilet is a latrine for this area. The only aspect that should be taken in consideration is the position and the ability of emptying the unit over time. Flush sanitation is not an option so the only available option is to use pit latrines.

→ Development guidelines:

- Because of the type of toilet (pit latrine) the facility should be placed outside the house
- The community has to decide where the sanitation units should be placed per household.
- Pit latrines should be positioned near vegetable garden so it can act as a fertilizer.

PROGRAM: bedroom



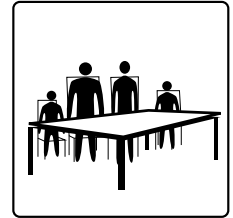
As described in the second part of the research at the moment the inhabitants separate their functions inside the dwellings by cloths. In the eyes of the developer this should be changed into walls. The inhabitants like the increasing amount of privacy between parents and children. Although the inhabitants should have the freedom to make their own choices we might inform them about the disadvantages of the walls. Limiting the flexibility of the dwelling and the division of the different functions. So I would like to suggest a way of separation that is flexible but increases the privacy. Besides that an alternative should be given on a possible flexible wall made out of brickwork.

Development guidelines: ←

- Providing an alternative separator inside the dwellings that improves privacy
- Develop a building system for walls that is also flexible and offers connectivity on outside wall at any given position.

PROGRAM: living room

Although inhabitants and developer agree on a living room inside the dwelling we shouldn't forget the fact that most of the living space is still outside. The family observation presented in part II of the research revealed that most of the time is spend outside the house in the centre of the family compound. The orientation of the dwellings towards this space and the communication this space has with its surrounding is essential for the community life. In the plans an indoor living room should be included but an alternative that still has the former values should also be a possibility. I would like to suggest the possibility of an indoor living space that continues to the central outdoor living space. It would provide shelter from rain but still have the open communication between the different family members and the community.



Development guidelines: ←

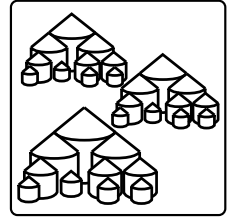
- Offer the possibility of an indoor living room but that can easily be opened towards the central outdoor living area.
- The central outdoor living area should only be partly enclosed to offer communication to the surroundings.

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ORGANIZATION: density

Former organization was performed by the community board and chairman. In the current camps this regulation is lost. The developers are setting up a contract that restricts the inhabitants for constructing additional structures to prevent urban sprawl. Although both see the urban sprawl as problematic it should be clear that people will oppose to the idea that they can't build any additional structures. Again the high urban density can be prevented when a maximum amount of additional structures is set and regulated by the community itself.



Development guidelines: ←

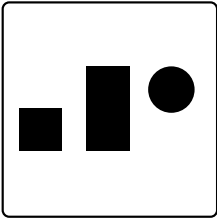
- Set maximum amount of extensions to a compound.
- Set a border for development area on plot (the rest is meant as horticulture ground)
- Reinstate community principle to communicate additions to developers.



FORM: size&shape

When we compare the current typology of dwelling with the one that is currently developed the size and shape doesn't defer that much from each other. But this is measured by the average dwelling inside the camp. The fact is that there is not a single dwelling that has the same measurements. So although the inhabitants agree on size and shape we could hardly imagine that one dimension and size for everybody could work. For this reason a modular system of different sizes, so the inhabitants can decide for themselves which dimensions they would like for the dwelling should be introduced. Another issue is that there are also still a lot of dwelling in a circular shape. For this reason we should introduce a circular system this will also help make possible the pits for the latrines.

Modular in this sense doesn't mean that the size and layout of house is fixed, for this reason the modularity is realized by a modular brick.



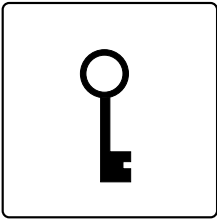
→ Development guidelines:

- Introduce a dwelling typology that can be built by the inhabitants themselves
- Develop a circular and rectangular modular brick that has a large amount of different dwelling sizes and shapes, which gives the inhabitants the freedom to create their own dwelling typology.





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COSTS: owner

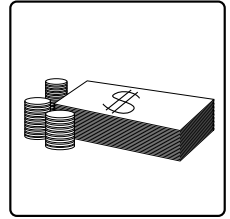
One of the most valued aspects on the new development is the fact that the inhabitants will own the plot and house themselves. Something that most of the inhabitants never had. In my point of view this will make people responsible and proud of their dwelling and plot. Because of this they will maintain their property. Question is how much quality of life this new habitation will give to their inhabitants. Because of all the regulations they don't really own the house. Actually they can hardly make any changes, so this could feel closer to a prison than a house. So we should suggest to decrease the amount of force being used in the contract and try to make the inhabitants responsible as possible for their plot and dwelling. On top of that the community board and chairman will make sure that the community is organized and lives on basis of fairness.

→ Development guidelines:

- Reinstatement of community principle to communicate additions to developers.

COSTS: amount

For 150.000 Kenyan Shilling(1500 Euro) the developers provide a family with a plot 1000m², a family house and a sanitation unit. Even for local terms this is extremely cheap, especially ground is rather expensive. But compared to the current dwelling inside the camps it is relatively expensive. Mainly because of the used labour costs and expensive materials. In the traditional dwellings only local (free) materials are used and people build their dwellings together. This means that the dwelling are almost free. We also shouldn't forget the importance of building together as a community. The point I'm trying to make is to contrast the difference between the two solutions and the side effects. I would like to suggest a self-build dwelling made of only local materials that should make the dwelling extremely cheap and fast to build. But more importantly a development process that is sensitive towards the environment and that creates a responsible and homogenous community.



Development guidelines: ←

- Community should build the houses themselves to press the costs
- Usage of only local materials

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ACTIVITY: religion



Religion is extremely important throughout the most of Kenya. In the camps there are numerous cases where the family house functions as a little chapel. People gather here at the end of the day to share their faith. Compared with past habitation almost every village has a church or chapel in centre of the community.

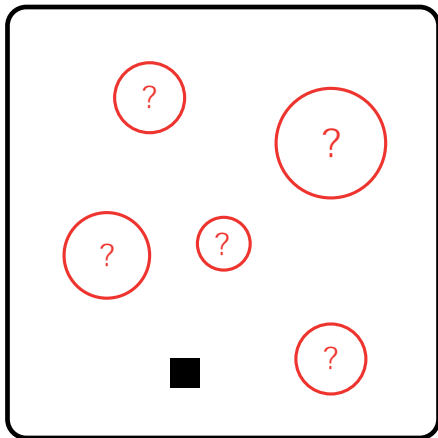
Because religion is so important we should think of a way to keep religion a central part of the community. In my point of view an extension should be possible to the house which can be used for religious purposes. Or a communal area where a chapel can be build.

Rituals and religion are closely related so should be combined in a community centre.

Development guidelines: ←

- Developed a dwelling extension as chapel
- Reserve a central space in de community for celebrations and rituals
- Provide communal places and spaces that are funded from communal funding.

NOT MENTIONED BY
THE DEVELOPERS

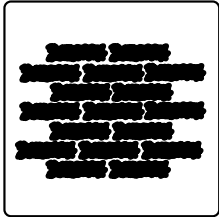


The inhabitants mentioned certain aspects during my conversations with them, that the developers did not. This doesn't mean that they are not important. But because it is one sided, I will only formulate development rules on the parts mentioned in part II by the inhabitants. So I will address which part the development rules will apply and leave out the explanation which I gave in the chapters mentioned before.

DEVELOPMENT GUIDELINES

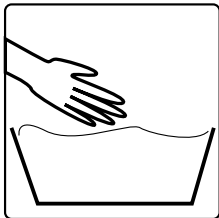
Negative Values

From the aspects that were considered negative we can derive the following guidelines to improve or prevent problems.



MATERIAL: organic

- Create construction materials that are based on local products but have an enhanced durability and have a surface that is cleaned easily.



ACTIVITY: washing clothes

- A central washing location per community should be created that is close to the dwellings but is still a place to gather, for young and old.
- Provide a small washing place in the back of the family compound to make sure that the families can also wash a few clothes at the end of the day.

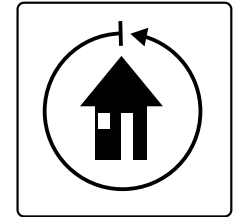
ACTIVITY: cleaning

- The finish of floor and walls should be easy to clean but still have the characteristics of the old materials (repellent, soft surface, easy to apply, etc.)



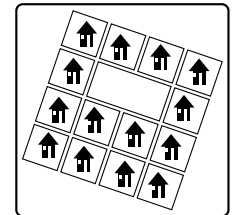
COST: lifecycle

- A lifecycle analysis of current families should be placed to the future prediction in order to make an accurate calculation how long the dwelling should last.



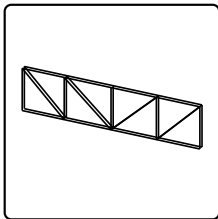
ORGANIZATION: village

- Every household should have one representative in the community board meeting
- Within every community there should be three people elected every 5 years to communicate development to the developers.
- A chairman should be appointed as ceremony leader, although he will be the advisor of the community decisions are made by the community as a whole. (to prevent the misuse of power which is seen in the current camps)



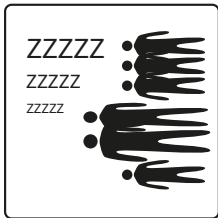
Positive

Also from the positive values we can derive guidelines to enhance or support certain aspects.



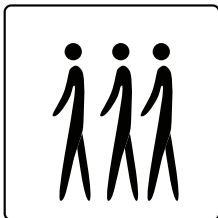
MATERIAL: fabricated

- Create construction materials that are based on local products and have innovative look.
(in this way status and progress is not translated to money but the development of construction products and finishes)



HABIT: sleeping together

- Sleeping together in the main family house should be integrated in the new development.
- Separation between the different sleeping places should be made of a light flexible material but that still gives enough privacy.



HABIT: walking to work and school together

- An informal infrastructure should be formed with one main road leading to the farm and Chepchoina.
(this is currently the main direction of the main road inside the camps)
- Motorized vehicles should be restricted from this internal main infrastructure.

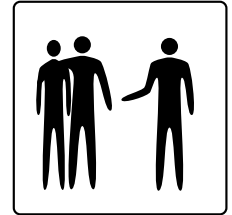
- fetching water

- This point is close the point mentioned by washing. A central water source should be provided to collect water in the centre of every community.



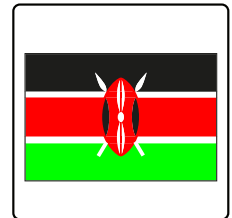
ACTIVITY: meeting

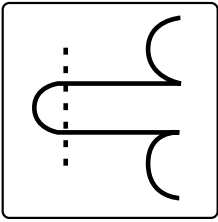
- Keep the open central living space in future development which is a meeting place for the different family members but also for people that shortly stop by.
- In the planning of water points and at the position of cultural ground is that these places are also used as meeting points and should have shady places to sit and talk.
- Create activity places where children can play soccer or other sorts of activity.



SOCIAL CULTURAL ACTIVITIES: national celebrations

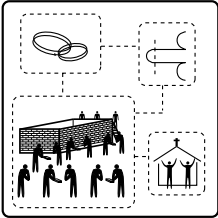
- In the community centre there should be a place covered which is large enough for all the inhabitants of the community. (most celebrations are currently celebrated in schools or churches because the lack of such a place inside the camps. Some of the celebrations are supposed to take place on school or churches but there are certain events that are during public holidays and should be celebrated within the community)





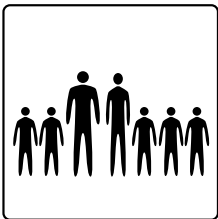
- **circumcision**

- The community should be able to decide where the chairman should live and how the route for procession should be.
- In the community centre there should be a covered place which is large enough to give place to all the inhabitants of the community.



SOCIAL CULTURAL ACTIVITIES: birth, dowry&marriage

- A small church in the centre of the communities should be provided, where these official Christian ceremonies can be performed.
- In the community centre there should be a covered place which is large enough for all the inhabitants of the community for these activities (for 15 families maximum of 150).

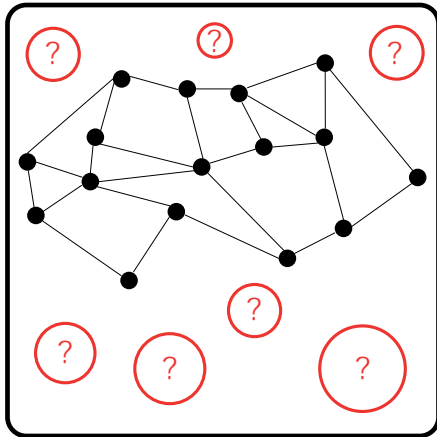


RELATIONSHIPS: family, friends, church, etc.

- In general I would like to state that the developers shouldn't make any decisions in cultural and social sense for the inhabitants. These complex relations and ways of interaction are different for everybody and there is not one way of organizing them. Social space should be calculated as an amount to leave open for the community to fill in for themselves.

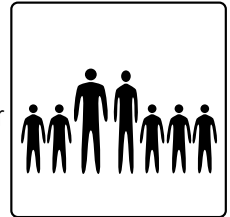


NOT MENTIONED BY
THE INHABITANTS



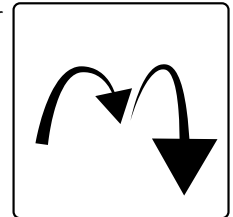
FAMILY: size

- The inhabitants should decide for themselves how many children they want and how much this can fit in the budget of the family. The developers can only explain consequences through education, the dwelling size shouldn't be restricted in order to make families smaller.
- The dwellings should be able to adapt to the family size.



GEOGRAPHY: position

- Through centuries farm workers placed themselves on the farm which was approved by the former owners. Some of the families that live on farm ground now aren't working for the farm anymore but still originate from the first families. Although the ground belongs to the farm these people and settlements can't be just removed and can only be asked to move overtime to a more suitable area for the farmer. Or at least be offered a financial compensation.
- The flow of new people to the camps should be stopped, which can only be done when the inhabitants start to understand the problem and will act together to stop the flow.
- A new piece of land should be given to the people by the owners as compensation. This community should also get its own community board and chairman. But more importantly also remain communicating with the developers.



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MATERIAL: durability

- A more durable material is wanted and needed but a mechanical made product is not the solution. New local made products should be searched or stimulated to develop.



CONSTRUCTION: mechanical

- Mechanical produced dwellings are wanted by the developers but doesn't suit the question of the inhabitants. The inhabitants developed a construction system over centuries and still breathes the identity of former generations. This is transferred from father to son and from mother to daughter. Aim should be to develop a system that only tries to enhance the use of the dwellings and decreases the amount of maintenance.
- Local constructions methods should be analysed and reused in the new proposed development.



LEFTOVER (UNMENTIONED) RESEARCH TOPICS

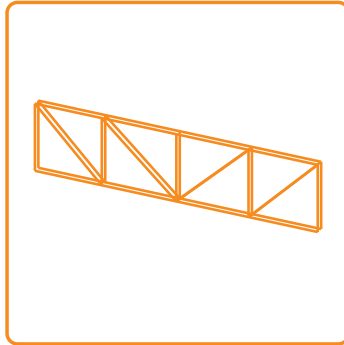
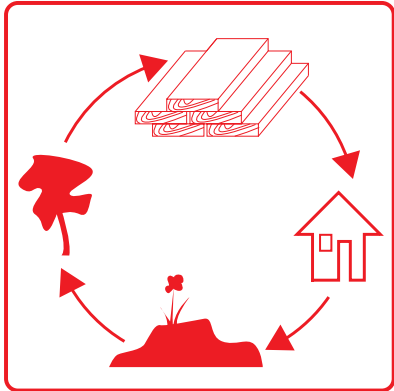
The diagram on the next page shows all the mentioned subjects in grey and all unmentioned subjects in clear black. In this first section of part III most of the unmentioned factors will be explained, possible answers will also be given to how to deal with the subject in the development process.

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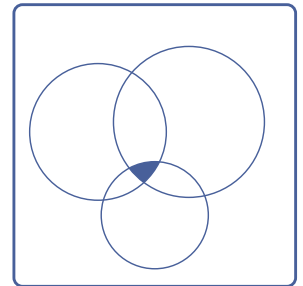
HIERARCHY

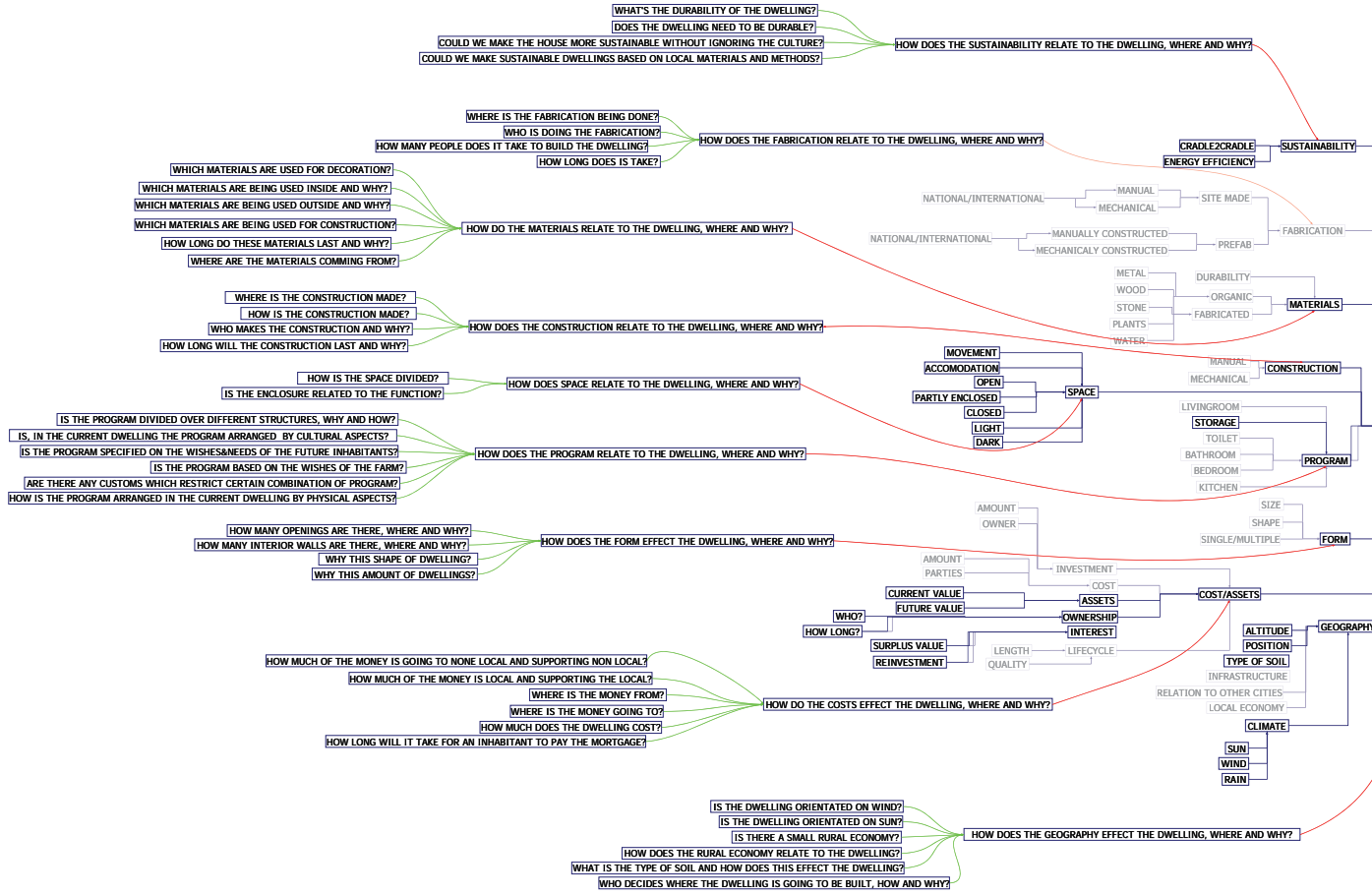
Because not all subjects are essential for this research and development I established a hierarchy in the subjects.

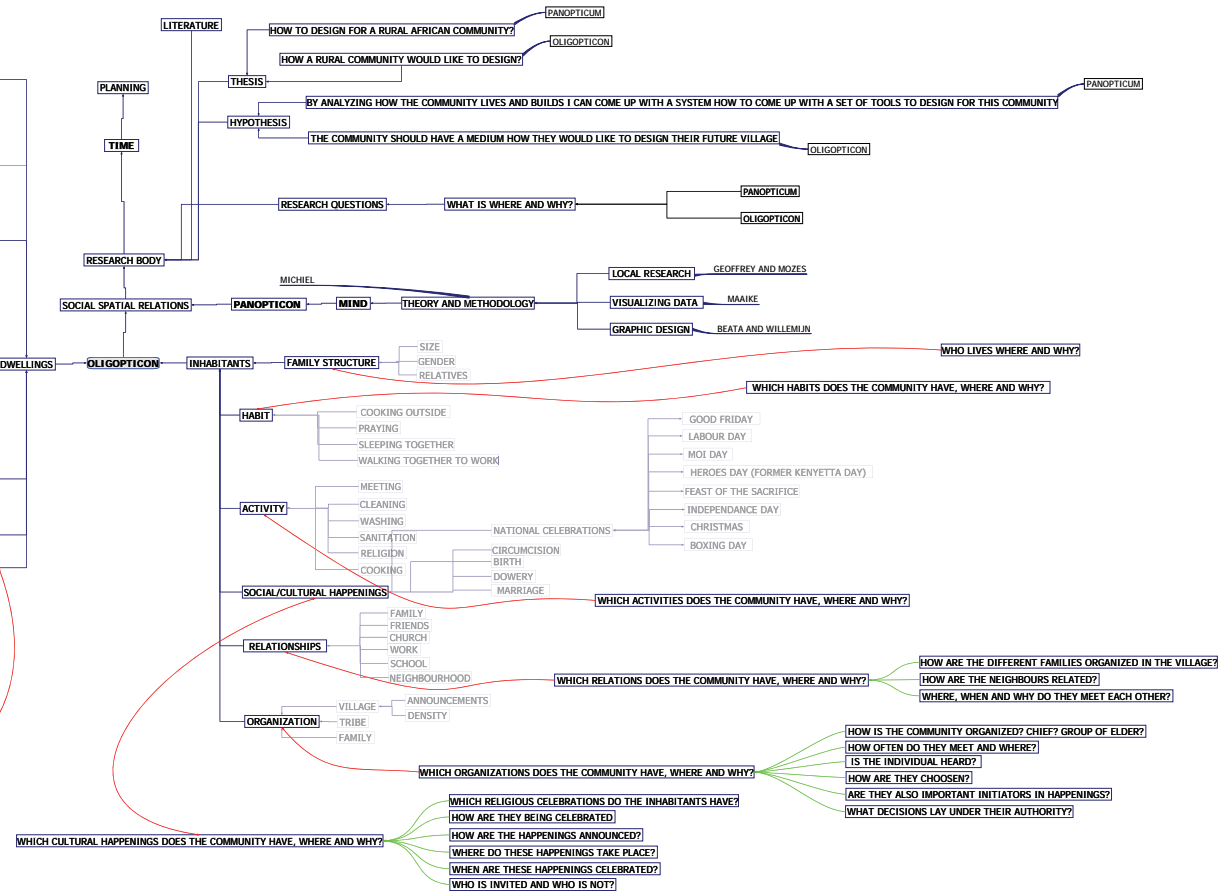
Red are the most important subjects, orange are important but don't need immediate attention and blue are not important for the research but could possibly be covered at a later moment. Again this research revolves around two main themes (dwelling and inhabitant) and will be mentioned as two separate sections which will be shown in the upcoming pages.

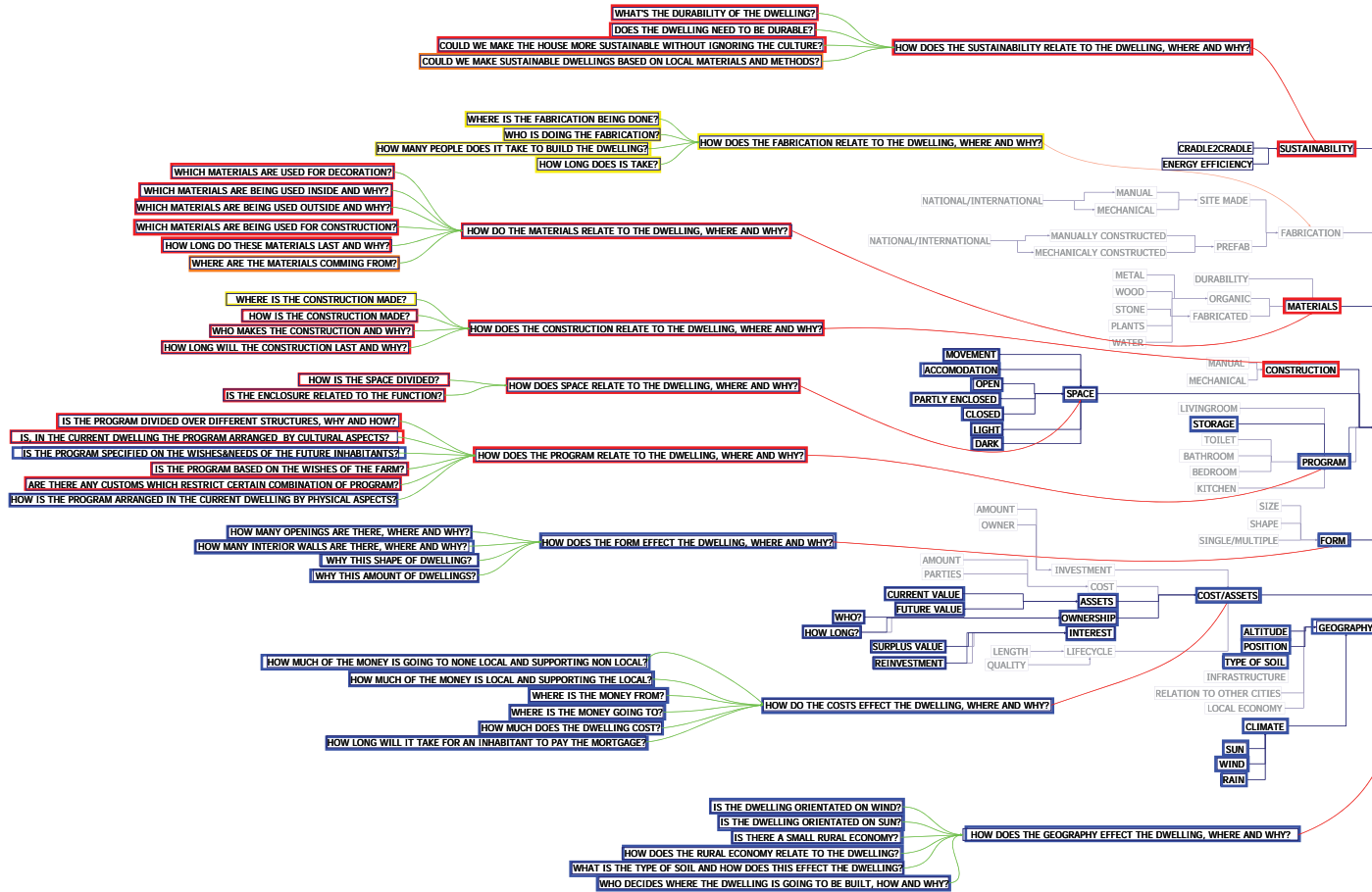


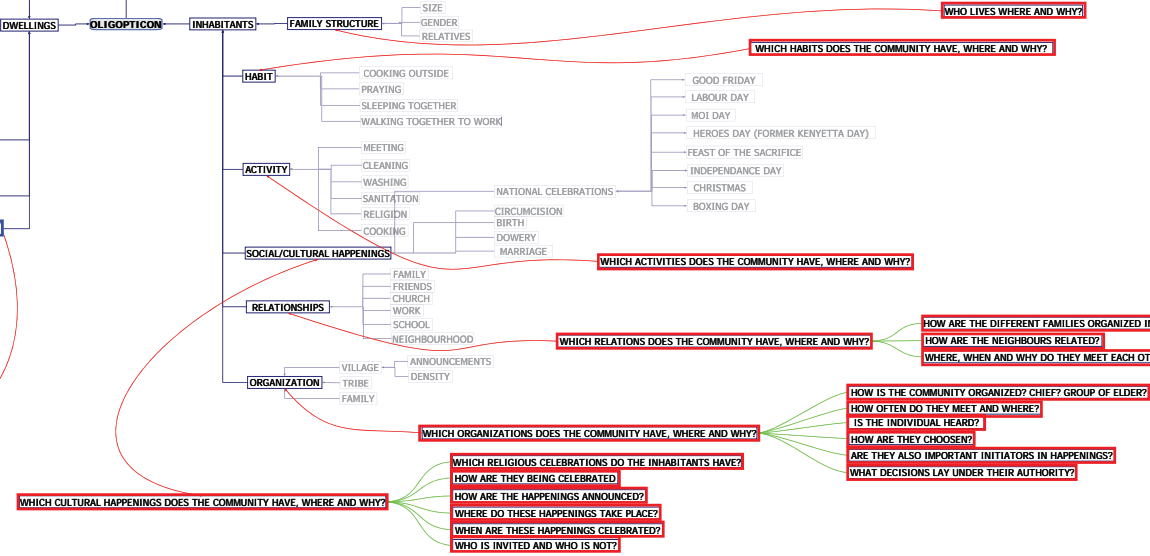
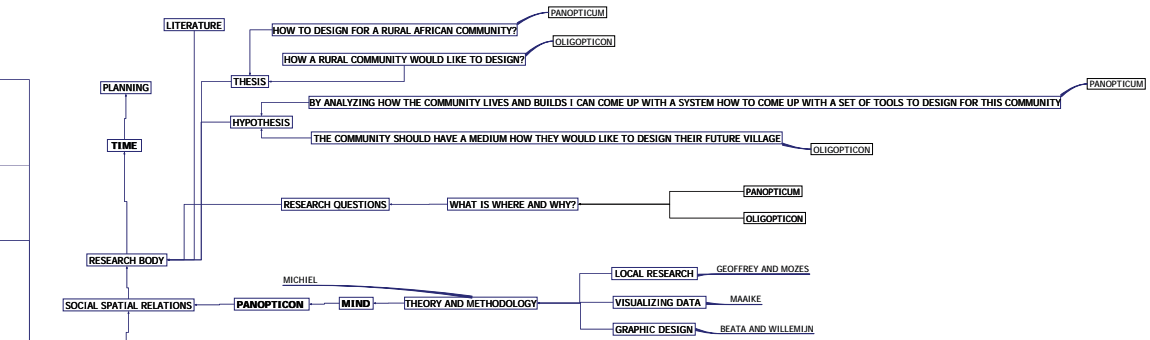
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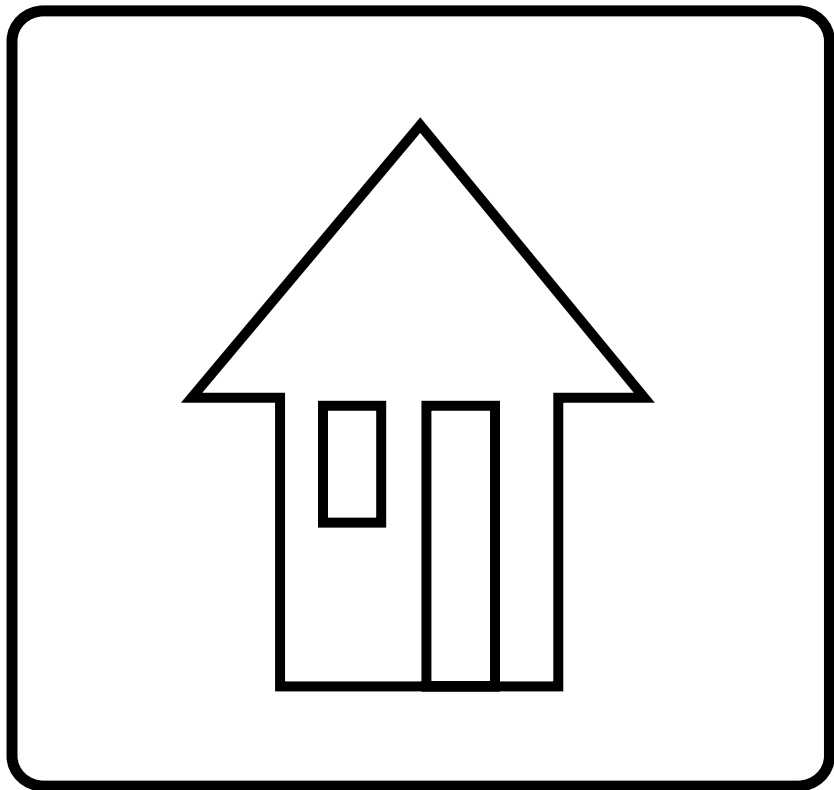






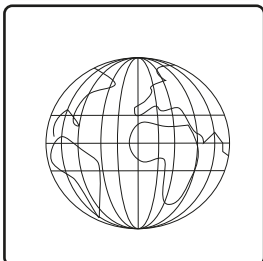
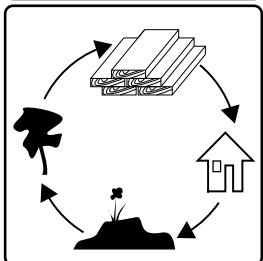
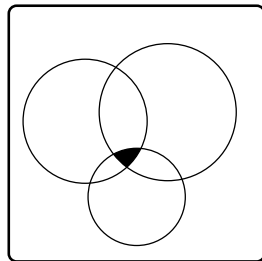
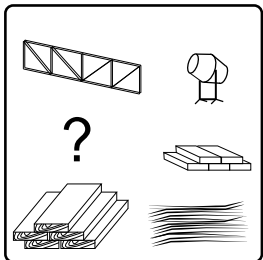
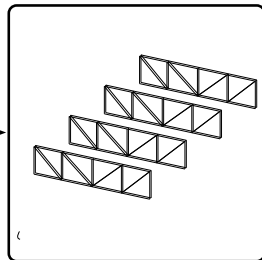
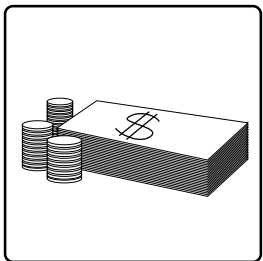
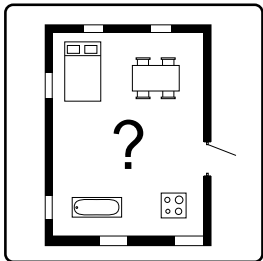
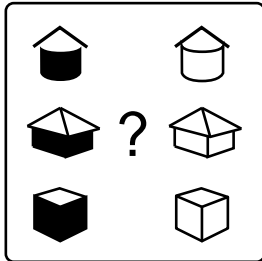




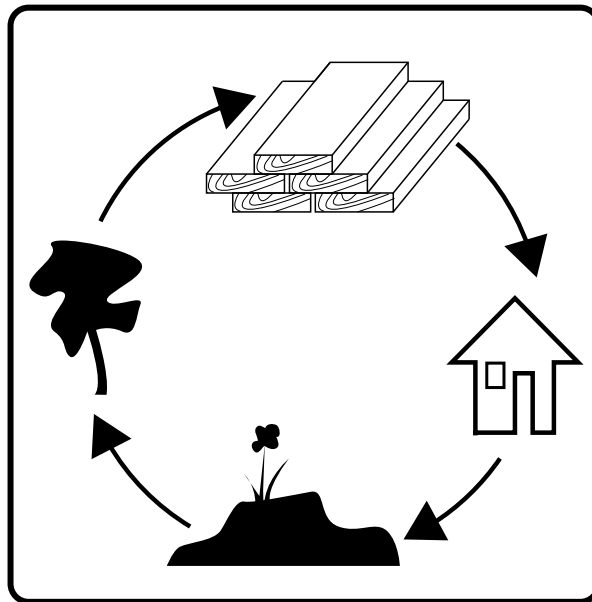


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UNMENTIONED ASPECTS ABOUT DWELLING



SUSTAINABILITY



Main question: **How does the sustainability relate to the dwelling, where and why?**

Sub question: What's the durability of the dwelling?

Current dwelling

At the moment most of the mud based houses last for about 60 years. Through the years the walls often need to be patched up, the floors need to be levelled out and the roof needs a new thatch. This basically means that the dwelling doesn't last very long compared to western archetypes, and that the dwelling needs a lot of maintenance during his life spend. Although, all materials are found in the surrounding and the durability matches the cultural wanted time span.

New dwelling

The new houses built by habitat for humanity are calculated to last for over a 100 years. Compared to the mud based dwellings they don't need much maintenance during their lifespan. The iron sheets last 20 years but because they are galvanized will last for almost 30 years, besides the roof replacement the house will only need some minor repainting on the inside walls and framework. Problem for the durability is that most people replace the sheets very late (seen in the cement structures in the camps) and because of that the walls, floors and framework are damaged faster than it normally would. This has a lot to do with prices of materials and the availability in remote areas like these.

Sub question: Does the dwelling need to be durable?

Former

When we look at the former way of building as described in part I&II the dwelling would last for one generation. The dwelling would, so to speak, die with his inhabitant, actually the inhabitant would be buried just next to his front door. After an certain undefined amount of years after the inhabitants and dwellings death people would reoccupy this plot.

Current

In the current way of living in rural areas this idea is slowly changing. Most of this transition is influenced by the changes of living and archetype that are developed inside small cities. The former family compound is now being slowly transformed to a small plot where the family constructs a durable dwelling that will last for generations. The rest of the family ground is often sold to other inhabitants. If we take a close look at the camps we can actually see how this develops. Here you see that people build small houses to rent to others or sell (ground which is not theirs) to others for them to occupy that piece of land

Sub question: Could we make the house more sustainable without ignoring the culture?

Current dwellings

If we take a close look at the current habitation we could say its almost 100% sustainable. Building materials are only organic and found in the direct surroundings. Just like a tree the dwelling grows and dies as a natural process.

Future dwellings

From observations in the region and different literature I found out that there are enough materials and methods to provide inhabitants with a more durable dwelling. A dwelling that still breathes the local vernacular architecture and culture, but doesn't dilute commodities or other natural resources.

Sub question:

Could we make sustainable dwellings based on local materials and methods?

Current

The construction of different parts of the house are divided over men and women depending on the tribe. Most of the construction is done together with other members of the community and even certain tribes believe that the dwelling has to be built in one day. Which means they have to build all together. This way of development includes a large part of the community and work as a social cultural bounder between different families. By extracting this part of the development social cohesion is lost and the deregulation of that society decreases with every development. Also the usage of status symbols (materials like iron sheets and cement blocks) are dividing the community. Mainly because in this situation everybody wants to have more.

Desired

So the sustainability of both material and method is reliant on the integrity of use of material and the way that construction is organized by the community. Because as long the community build themselves they will never need mechanically produced construction or materials.

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Main question: How does the sustainability relate to the dwelling, where and why?

From a physical point of view we could easily explain the importance of a durable dwelling. That the longer the dwelling last the better it is in terms of the amount of materials used, workforce and so on. If a dwelling last twice as long you need half the workforce and half of the materials. Often durable materials are also easier to clean and have a nicer finishing look. You would say a more durable dwelling would be preferable, but the answer to this question is not that easy formulated.

In the cities people see new types of dwelling. Higher durability, less cleaning, less repairing and the modern look (or better than the vernacular dwelling). Just as every other human the people that live inside the camps want better nicer looking dwellings like the other people have inside the towns. Who are we to tell them that the vernacular based dwelling is better from cultural perspective? We should be looking for an archetype that does have a new look and higher durability, but we should be building it on local materials and based on the local identity that is created on the local vernacular archetype.

What actually can be concluded is that the more the local vernacular architecture is disturbed by more durable mechanical produced products the more inhabitants will rely on money to buy these products instead of taking them straight from the surrounding. We could say that it is a cultural misunderstanding that what looks better and lasts longer is also the most sustainable. Although, why would the inhabitants care about sustainability? I guess that we could only explain to them what the negative effects for their culture and the planet are. But also that we want to prevent a rural community to develop themselves radically and by that losing each other and their heritage.



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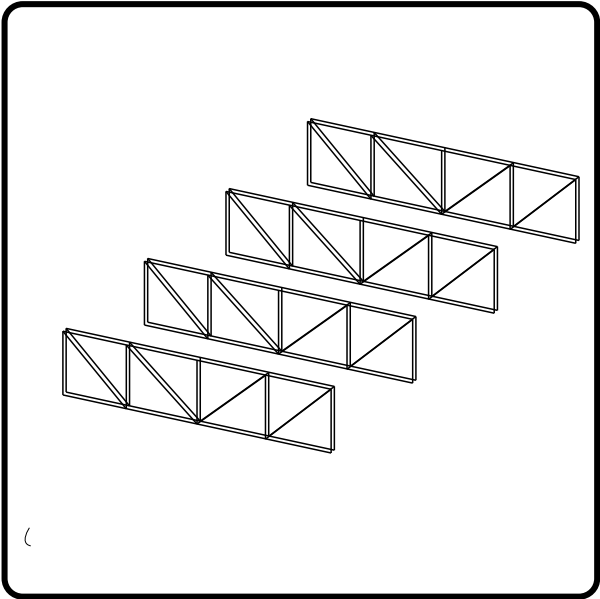


In short we should apply the following guidelines in the development process.

Development guidelines: ←

- Materialisation should be tuned to the availability in the area and the price. If not maintenance even small will cause major problems and will decrease the lifespan of even the most durable dwelling.
- I should be looking for an archetype that has a new look and higher durability, but we should be building it on local materials and based on the local identity that is created by the local vernacular archetype.
- The dwellings should only be constructed from natural local materials that breathe the local cultural identity.
- The sustainability of both material and method is reliant on the integrity of use of material and the way that construction is organized by the community. Because as long the community build themselves they will never need mechanically produced construction or materials.

FABRICATION



Main question: How does the fabrication relate to the dwelling, where and why?

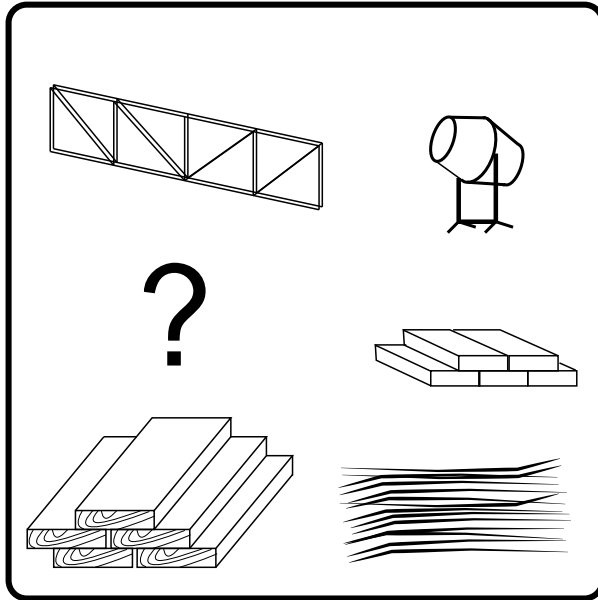
Sub question: Where is the fabrication being done?

Sub question: Who is doing the fabrication?

Sub question: How many people does it take to build the dwelling?

Sub question: How long does it take?

MATERIALS



Main question: **How do the materials relate to the dwelling, where and why?**

Sub question: Which materials are used for decoration?

Current

The current dwellings inside the camp have very few decorations. In the past the houses were decorated by importance and identity of the family within the community. Inside the camps this identity differentiation is lost because of the cultural displacement. Now tradition and pride is making place for rationality and ease. A few dwellings inside the camp have external decorations and are made of a similar mixture that is used for the wall finish. Only this decorative mixtures has more water and there is chalk or coal added for colour differentiation. The internal wall decoration is very limited because it doesn't really have an added function for the family. Most dwellings have cloths hanging in front of the windows and sometimes an old newspaper hanging on the wall. But besides that not much of decoration.

Cause

Again the question arises how much of these traditional ways of decoration of the dwelling are lost because of the effect of social displacement. An important cause of this displacement if the economical attractive force that pulls people out of their traditional villages in the first place. But the introduction of other materials into the dwelling process is also an important factor in the loss of individual decorative expression.

Sub question: Which materials are being used inside and why?

Walls

All the materials used for the inside finish have the same composition. General compounds are mud, clay and faeces. Only in the walls the amount of clay is higher and has less faeces. The high amount of clay in the walls is explained to gain more strength in the mixture and to make the walls more water resistant. (Literature faeces as repellent)

Floor

In the floor there is less clay and more faeces in the mixture. From conversations with the villagers they explained that because most children sleep on the ground with a thin mat the floor has more faeces and less mud to make the floor softer to sleep on.

Sub question: Which materials are being used outside and why?

Walls

At the base of the wall large stones are being placed to protect the wall from animals but also against water that comes up splashing to the wall. The exterior wall finish is thinner than inside. Most of the times this finish looks rougher because of grass and little twigs pushing through the mixture. This creates a stronger binder to prevent the mud to be washed away by the rain.

Roof

They roofed with a thatch. Just as all the materials used for the dwelling they all come straight from the surrounding. In this region everybody thatches their roofs. Because of vast amounts of wet grounds at the foot of Mount Elgon there is more than enough thatch. This material is a high insulator against the sun, it keeps the hot air in the evenings inside and has a nice acoustic value. (literature on thatch roofs in Africa)

Sub question: Which materials are being used for construction?

Framework

Wooden poles are driven into the ground to base the whole framework on and to support the roof construction. Second step is to intertwine twigs around the framework. Now the roof frame can be placed, still all made of the same local hardwood. The next step is to prevent moist to weaken the structure so the roof is thatched, made of dried river cane. Now large boulders are bashed into the soil inside the dwelling to form a solid base for the floor slab.

Finishing

Now the floor is ready to be filled up with a mixture of mud, grass and clay. For the walls large pieces of clay blocks are found to fill the wall up as much as they can. As support the first layer at the ground floor is made out of large boulders. When the walls are filled up as much as they could they again start to fill up the gaps like they did with the floor slab. When all the walls are filled up the house can be finished described in the two questions before this one.

Sub question: How long do these materials last and why?

Cost

As described before there are two reasons why these materials are chosen even with their low durability. One is that they are free and easy to find in the surrounding.

Lifespan

The second is that people see no reason to build a dwelling that will last longer than they live. So both reasons fit perfectly together. For further explanation on lifespan see durability.

Sub question: Where are the materials coming from?

CONCLUSION

Main question: How do the materials relate to the dwelling, where and why?

In general the materials used in the dwellings are selected through hundreds of generations that lived in this western district of Kenya. Dimension of walls fit the climate, finish of walls and floors improve the character of the element to protect it or to make better use of the surface. Taking a close look at the dwellings shows that every decision has been made carefully. Every choice has a good reason namely centuries of trial and error. If anything was to be changed on the dwellings it needs to be certain it's going to be an improvement of the quality of the dwelling for the inhabitant.

"The folk tradition, on the other hand, is the direct and unself-conscious translation into physical form of a culture, its needs and values-as well as the desires, dreams, and passions of a people expressed in buildings and settlements, with nodesigner, artist, or architect."¹



Development guidelines: ←

- Individual expression should be motivated to use decorative elements as much as possible and hopefully make the use of status related objects unnecessary. What should mean that the community has a standard archetype which functions as a white canvas. On this white canvas people can only make little decorative differentiation between them and other members of the community.
- Finishes and materials should be analysed on the function that they have in the dwelling. Some of the used materials decrease the living quality of functions of the dwelling. By removing these traditional materials the softness of certain surfaces is lost and are there no elements left that could work as a repellent. For every material that you replace the functions and characteristics should be copied as much as possible.
- Materials used on the outside give the inhabitants their identity. When applied among different inhabitants it increases the communal identity. Even finishes with a very low durability can be extremely durable when finished with a coating of paint or lime.
- For every part of the dwelling we should search for materials and construction methods that come from the direct surrounding of the community. The best way to improve the average living quality of the dwelling is by improving local constructions methods and materials.



CONSTRUCTION



Main question: **How does the construction relate to the dwelling, where and why?**

Sub question: Who makes the construction and why?

Women

The family house is built by the couple themselves. Most of the times family and friends help with the process. In this process ladies are in charge of mixing the mortar, tying and thatching the roof and finishing floors and walls.

Men

Men are in charge of main construction and the other heavy labour. Small extension for let's say a kitchen are often made over time and are realized by the couple themselves (same division of work). For larger extensions for example older children the whole family helps. Again same distribution is used between men and women. When asked the inhabitants themselves couldn't really answer why, they told me that this is the difference between work that women are supposed to do and what men supposed to do.

Sub question: How long will the construction last and why?

How long

In general the construction lasts longer than the walls themselves. If the construction is protected against the elements and insects, it can last up to 70 years.

Why

But even hardwood will eventually break down which is in line with the communal rule. The rule that after all pieces of the dwelling of a deceased inhabitant are gone which means for the hard wood close to 100-110 years the plot is ready to be reoccupied.

CONCLUSION

Main question: How does the construction relate to the dwelling, where and why?

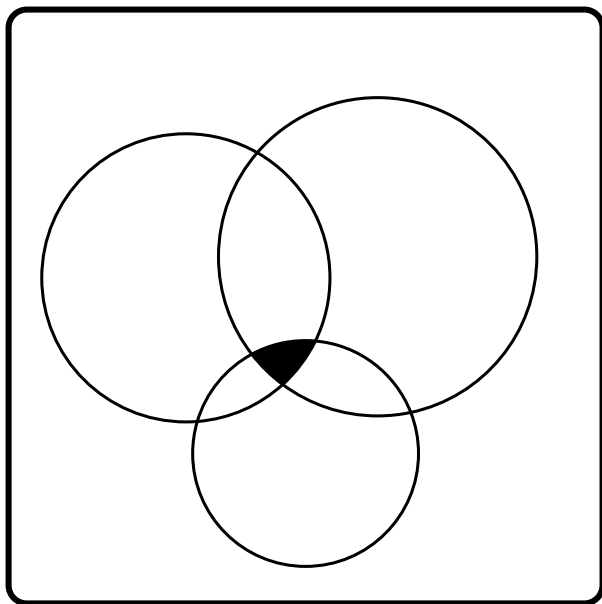
We could say that the construction of the houses is one of the key elements of the current culture of the inhabitants. Neglecting or ignoring seems unsuited and creates more problems than it actually solves. For further development it is essential to reinstate the construction culture. It makes the families and communities proud and is far more economical than paid labour.

Design guidelines: ←

- The process of constructing house is a tradition transferred over generations. It has made the rural villages to what they are unique, adapted and one. This should supported in any new development. It establishes community and identity but also keeps the construction culture.
- In the project the durability of the dwelling should remain the same because for most structures there is not really a reason that they should last longer. Most important fact is that the dwellings should take just a small amount of maintenance and are easy to clean.



SPACE



Main question: **How does space relate to the dwelling, where and why?**

Sub question: How is the space divided?

Cloths

Walls

In most of the current dwellings there are no interior walls and space is divided by cotton cloths. Separating the parents' bedroom from the children and living room.

If there are any walls inside the dwelling it's between the kitchen and living room to prevent smoke penetrating into the rest of the dwelling. In this situation the wall is made as the exterior walls.

Sub question: Is the enclosure related to the function?

This subject is meant to give a closer perspective on how the different functions are enclosed inside the family compound. One of the most essential parts of family life is how they communicate to the surrounding. Because most of the family life is outside in the central family space and that this space is partly enclosed there is a good relation to neighbours and other community members.

Open

Inside the dwelling it seems that there is no hard division between the different functions. The only closure is defined by cloths to hide bedrooms from the living area. Most of the times this is done in case visitors may appear.

Closed

The dwellings on themselves are closed as much as possible to prevent thieves from getting in. Windows are kept as small as possible and as few as possible. Doors are made of hardwood and are often locked during daytime.

Partly enclosed

The family compound centre is partly enclosed by the dwellings of the family. It is meant for the family to meet each other during the end of the day to eat together. It does leave some spaces open for view on the street and offers a good view on the small vegetable gardens to prevent theft.

Light & Dark

Only the general living area outside is in the open air. All dwellings are extremely dark, that is not surprising with the few small windows and overhanging roof edges. But in past habitation windows were never popular because of the decreasing of protection against invaders.

CONCLUSION

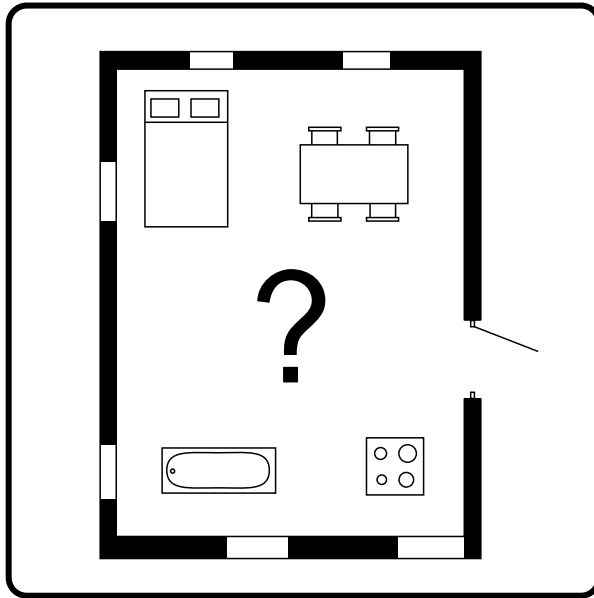
Main question: How does space relate to the dwelling, where and why?

There is a strong distinction between public and private space inside the camps. Most family structures are extremely introvert. Primary reason for the inhabitants to live in such a introvert way is that in most cases they don't know their neighbours that well. But also because of the high number of theft. Often performed during the day when everybody is out to work and school. We can only imagine what would happen if social order and regulation is reintroduced to prevent the communities for closing them of from each other.

Development guidelines:

- Inside the main family house there is almost no separation between the different functions, this has much to say about the importance of inner family communication.
- Space enclosure and dwelling position are extremely important how the family communicates with each other and the surrounding families. Right now livingrooms are more and more being included inside the family home, but it also decreases communication to the surrounding. In any way the family should be given the chance to organize their own family and the way they would like to communicate.

PROGRAM



Main question:

How does the program relate to the dwelling, where and why?

Sub question: Is the program divided over different structures, why and how?

Past

When we take a close look on the past habitation the family compound the functions were divided over different structures. A man didn't have a dwelling of himself but had multiple women that would build their dwelling inside the family compound. Children would sleep up to their 5th year with their mother, everybody sleeps on the ground on mats. Then a small structure would be erected in the family compound to provide a bedroom for the child. Boys and girls always divided over different structures. Most people inside the past habitation cooked outside, which in the family compound is often done in the central living area between the different structures. If not another structure would be erected or the women would make a small fire inside their dwelling. The living room is outside defined as the central living space of all the structures. With "different" families living inside one family compound that was the most logic place for a whole family to come together.

Current

In the current habitation when possible the living situation is somewhat alike the past habitation. Only major difference is that the model has become more dense. Because most families have become monogamous man and wife have one dwelling together. Again children up to their 5th year live inside the family dwelling and after that have to start sleeping in a separate structure. Inside the camps there are many different ways this is organized by the families. Most families don't have a compound anymore and it is very difficult to build another structure. For this reason some of the functions started to intertwine. Most of the times the older girls sleep in the kitchen which is a structure that is detached or semi-detached from the family structure. In most cases the boys in the family have the best sleeping conditions. In many cases they were the only ones that had a bed when the girls were still sleeping on mats. Most of the families were able to position their structures in such a way a small central spot was created for them to meet and eat. But in a lot of cases a small living space is also created inside the family dwelling in case of bad weather.

Sub question:

Is, in the current dwelling the program arranged by cultural aspects?

Interpretation

Although this question is naïve stated because vernacular architecture grew on cultural aspects, the question leaves a lot of room for interpretation of the cultural aspects that organize program and dwellings in a spatial manner. In almost all cases the entrance of the family dwelling is positioned from the road to provide the family with some privacy.

Change

As described in the last question a lot of things changed between past habitation and current habitation. Maybe we could even speak of cultural changes. Because religion changed the way the family arranges themselves changed. Because the communities don't have the social structures of the villages anymore the communities are often left by themselves. Deregulation of the communities is one of the reasons that high density occurs and living quality deteriorates over the years. The reason of this deregulation is that in the past habitation a village board and chairmen were selected by the traditions and culture of that village. Now people are living together with their cultural identity slowly disappearing. The identity used to be the regulator in their communities.

Sub question:

Is the program based on the wishes of the farm?

Wishes of the farm

In terms of the current dwellings inside the camps the answer is no. This questions applies on the new dwellings currently being build. One of the major concerns of this research proved in Part I is that the developers develop from their own perspective often forgetting the needs of the inhabitants. Although they are trying to adapt the archetype as much as they can to local customs some of them are still often forgotten.

Wishes of the inhabitants

Another issue is that in the eyes of the developer most customs and traditions are the cause of problems. In part I the developers suggest a contract, a document that replaces the cultural regulations. In the past habitation children started to live in their own detached dwelling in the program of the developer this is not allowed. Another issue is that a living room is included in the program. The question remains if everybody wants a living room instead of the general central living space in the family compound. In general we could say that the developer takes all decisions related to the program. The question remains if this suits the wishes and customs of the inhabitants.

Sub question:

Are there any customs which restrict certain combination of program?

Primary

Throughout the research we have seen many examples of customs and traditions that arrange the program. The most important one is the repositioning of the children when they get older. Although every family is different the effects are huge. Around their 5th year boys and girls can't live together anymore. Every family and situation is different because a new structure involves money. So every solution is different. But what we have to keep in mind for the future development that this is one of the most important parts in compound regulation and program organization.

Secondary

The public private position of a family is very important. Most of the families mark their land with small green hedges and banana trees. The entrance of the family dwelling is always positioned towards the central living space. This living space never lays near a public space or road and is surrounded by the different family dwellings. In general most chores like cooking are performed by the women of the family. The position of the male children should be as far as possible from the kitchen.



Sub question:

Is the program specified on the wishes&needs of the future inhabitants?

Developers

It is clear that in the current plans of the developers they largely ignore the wishes and needs of the inhabitants. Besides that they intentionally obstruct family and community life. In my point of view this is a misunderstanding of the developers on the life of the inhabitants. Taking decisions for them is not the solution. They can only think of ways that they can communicate these problems.

Inhabitants

In the end the community itself should decide on the cultural changes that they want to establish. The most important is that every individual has different wishes and needs. So they should be able to realize them in the way they prefer.

Sub question:

How is the program arranged in the current dwelling by physical aspects?

Primary

At the moment the only physical barriers in family life are defined first of all to protect the inhabitants and their assets from the environment. In most dwellings the only walls constructed are on the exterior of the dwelling and are there no internal walls.

Secondary

Second physical separation that is made is to separate adult children from the parents. These children get their own structures to make them self-reliant.

Additional subject: Storage

Is a function that is often present in every room of the family. They do not really use any form of cupboards so often large bags or containers are used and set on the floor behind a bed or couch. Another aspect is that the only material that is stored is food and because of all rodents and insects it is wise to give this subject additional thought.

CONCLUSION

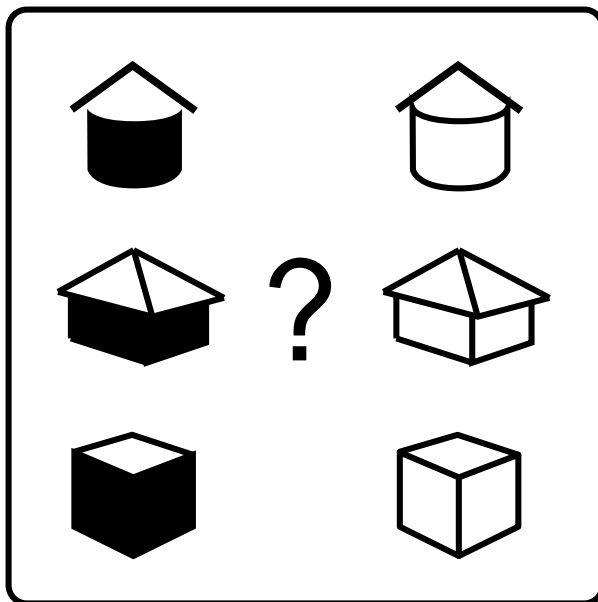
Main question: How does the program relate to the dwelling, where and why?

The current developer realizes one type of dwelling for the inhabitant with one program and internal organization. The complexity of family size, composition, origin of life, tribe, etc. makes almost every family unique in the way that they organize their inhabitants and program. We can only imagine how much friction future habitation is going to cause. In general we have to keep in mind that although we want to help only the inhabitants know where, how and why.

Development guidelines: ←

- Boys and girls sleep separated after their 5-6th year.
- Around their 20s most of the children get married and move out of the family compound. So any development of structures for the children wouldn't have to last longer than 20 years.
- A method should be searched to still provide adult children with their own dwelling and to have a central living area for the whole family that has a semi enclosed communication to the surroundings.
- Entrance of the family dwelling should be positioned towards the general living space and from the public areas.
- Construction culture is an important feature of the communal identity.
- Any intervention or other types of decision by the developers should be avoided at any level.
- Because the internal organization and situation of every family is different there is not one suitable program or organization for everybody. The archetype should be adapted and organized by the inhabitants themselves.

FORM (left
for further
investigation)



Main question: How does the form effect the dwelling, where and why?

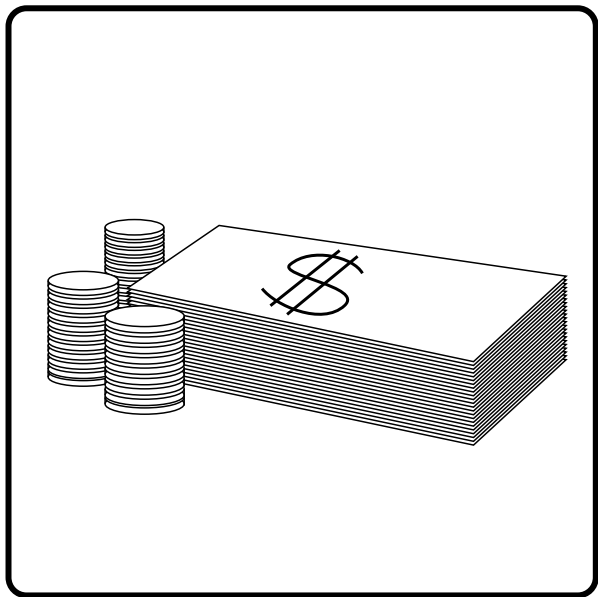
Sub question: How many openings are there, where and why?

Sub question: How many interior walls are there, where and why?

Sub question: Why this shape of dwelling?

Sub question: Why this amount of dwellings?

COST/ASSETS
(left for further
investigation)



Main question: How do the costs effect the dwelling, where and why?

Sub question: How much of the money is going to non-local and supporting non local?

Sub question: How much of the money is local and supporting the local?

Sub question: Where is the money from?

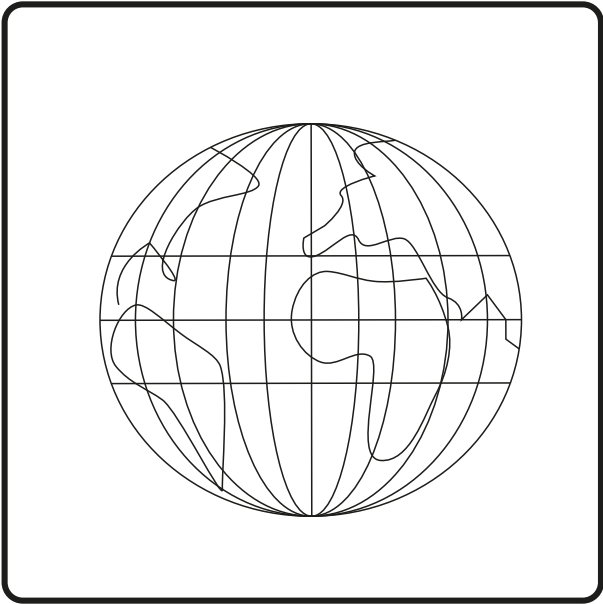
Sub question: Where is the money going to?

Sub question: How much does the dwelling cost?

Sub question: How long will it take for an inhabitant to pay the mortgage?

Additional subject:
Current value
Future value

GEOGRAPHY
(left for further
investigation)



- Main question: How does the geography effect the dwelling, where and why?
- Sub question: Is the dwelling orientated on wind?
- Sub question: Is the dwelling orientated on sun?
- Sub question: Is there a small rural economy?
- Sub question: How does the rural economy relate to the dwelling?
- Sub question: What is the type of soil and how does this affect the dwelling?
- Sub question: Who decides where the dwelling is going to be built, how and why?

Additional subject:

Position
Type of soil
Altitude

CLIMATE (left for further investigation)

Additional subject:

Sun
Wind
Rain

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CONCLUSION

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CONCLUSION

INTRODUCTION

The main focus of the research was to act as a communicator between the inhabitants and developers. Through the different chapters both sides have been investigated and explained from the stance of themselves. But even developers and inhabitants sometimes don't oversee all problems and possibilities. Therefore in chapter three all aspects that were left unmentioned in the main research topics were investigated. It was based on my own experience and knowledge of the situation on Mount Elgon. In the final conclusion I would like to address once more where the difficulties lay and as the answer describe what could be done to improve the current situation. Ultimately I will formulate an overview of all development guidelines so they can be used as a checklist in possible new development projects.

CONCLUSION FOR THE DEVELOPERS

All activities initiated by you are based on the perspective that you see current living conditions inside the camps and also in the region as problematic. Indeed we shouldn't romanticize the qualities of living in a self-made dwelling constructed of natural materials. Of course this way of living is time consuming in everyday life (fetching water, firewood, working on the land for food, maintenance on the house). But that doesn't mean that it is a bad thing to live in those conditions. From western perspective there is indeed a lot to improve but you have to accept the fact that every human being and his community has its own speed and way of developing itself. You can't simply decide by yourselves what is best for them and change this only on your own initiative. No one should forget there are aspects that improve the span of life and support growth like developed by you hospitals and schools in the remote area of Mount Elgon for which everyone ought to be grateful. But there is a line between where you can help and where you actually decide how people eat, sleep and work. Currently you (the initiators of the current development) provide your workers with all of this and thus decide for your workers what is best, where and how.

The example of the camp that is currently being built teaches how far this is actually going. A case in which you, as the owner, decide on how the people live (size of dwelling, position and orientation) and where the elements that are problematic in your opinion are restricted. All plots and indeed the whole area is fenced to prevent people from getting in. People can't choose with whom they are living with because you alone select the new inhabitants. Basically the word camp suits this development very well.

The question remains if you would like to live in such conditions yourselves? Would any person want to live in such a controlled environment?

Although you have the best intentions for your workers and their general life quality a border has to be drawn to prevent inhabitants from becoming completely reliant. Imagine what would happen if the farm would actually seize to

exist. Would it all end? That would happen if people are not making their own decisions and learn from possible mistakes. Still you can be initiators of ideas and development but you have to leave the actual developing of the idea to the communities and eventually let them develop the project themselves. One of the main problems currently is the organization inside the camps. But taking control over the organization doesn't help. The inhabitants know very well that conditions are far from what they would like them to be, but how can they change them if they don't own or control the ground they live on?

My main advice is to reposition all the inhabitants that want take control in their own hands. Let them sign up in a register to check how many people want a change. Give them the possibility to form communities and give every community a piece of land where they can start all over again together. With their own chairman and community board. This way they take action into their own hands and if a intruder tries to infiltrate the village these people will protect their community with everything they've got. This is the instinct of a community and has proved to be an effective method for them in the past centuries.

Of course as the developer, you need to have some control to check whether everything is going well and to understand who is living where. With the realization of a central community centre everybody that becomes a part of a community can be registered as well as his relatives or friends that come to live there. The community board will decide for itself if the person is wanted and accepted. Again, something that comes straight from the traditions that almost all inhabitants still have.

So controllability and organization is clarified, which leaves the problems of the current dwellings and sanitation. A proposal should be written for you (and any future developer in similar situation) for a system that is improved by the wishes and remarks of the inhabitants to improve their construction culture. Because again this has already proven to be a successful system for centuries inside traditional living. This will also be my personal task as a designer for the developers and inhabitants to provide a self-reliant system that the inhabitants can use to develop themselves.

CONCLUSION FOR THE INHABITANTS

Some of you were born in the camps, some started to live in the camps 60 years ago and some just came in the last 5 years from the out corners of the region and Uganda to come live and work there. You made the decision to leave your place of birth with a hope to find a better future. You don't own the ground your living on and the houses you are living in. More and more new people are becoming your neighbour which most of the times you don't even know. The owner of the farm tries to change the conditions and provides you with a plot, house and sanitation you can own yourself. Which you can only buy when you work for the farm or can pay the amount at once. Even if you can actually buy the house you still can't decide which one u would like to have or who your neighbours are. You aren't allowed to build any additional structures on your plot and most of your traditions like burying your deceased will not be allowed. Also is there no communal area where you can come together during celebrations and you are living inside a high barbed wire fence.

In general you are constantly in the fire of change and problems, most of the time issues that you don't have control on or you're not allowed to have control on. You're not allowed to maintain the houses your currently living in nor allowed to build any new structures. Basically every decision is being made for you and you have little influence on the decisions or possibility to express your opinion.

But in fact the owners of the farm really try to do what's best for you and other inhabitants, but they make decisions based on their own opinion. I understand that cultural differences are huge and the fact that for decades you were not allowed to give your opinion to former owners of the farm. With Bob and Bea things changed, as you can see with the development of the hospital and schools. Now they are trying to improve general living situation inside the camps. As explained earlier this is done by regulation and ownership. But actually you could develop your own house together with your community. You could select a group of people that you would like to live with and start your own community on a new location. A place where you make decisions together and develop your community yourself.

You will have to register yourself and relatives that want to live with you to communicate with the owners. In exchange you will make all decisions yourself together with your community. Of course you will have to take responsibilities such as: who lives in the community and which people might be invited to live with you. In general though all the decisions that you used to make in the traditional village will have to be made, for example: Who is going to be a part of the village board? Who will be the chairman? How many structures can a family have? It is a great responsibility but it gives you the opportunity to take actions and decisions into your own hands.

Many of you complained about the durability of the houses and the capability of cleaning surfaces. For this reason and general improvement the owner is developing a dwelling that gives these qualities. Problem is that you can't build the dwelling yourselves because of expensive and unknown materials. That is why I'm developing a system which is made of local products and that you can build yourself. The question is if this system suits the demands of the inhabitants. It will be left to you to change and adapt the system to individual needs.

It is important that you keep in mind the only way to take action into own hands is to communicate with the developers and bundle your force with people that share your idea. Only as a group you will be able to move forward and build as a community to your own future.

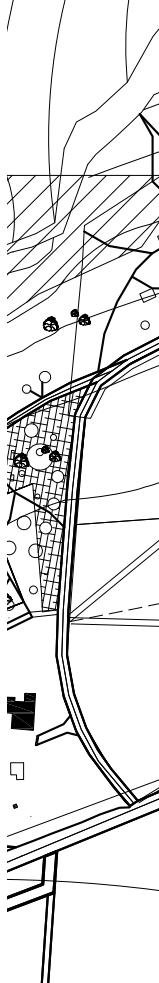
CONCLUSION FOR THE FUTURE DEVELOPMENT

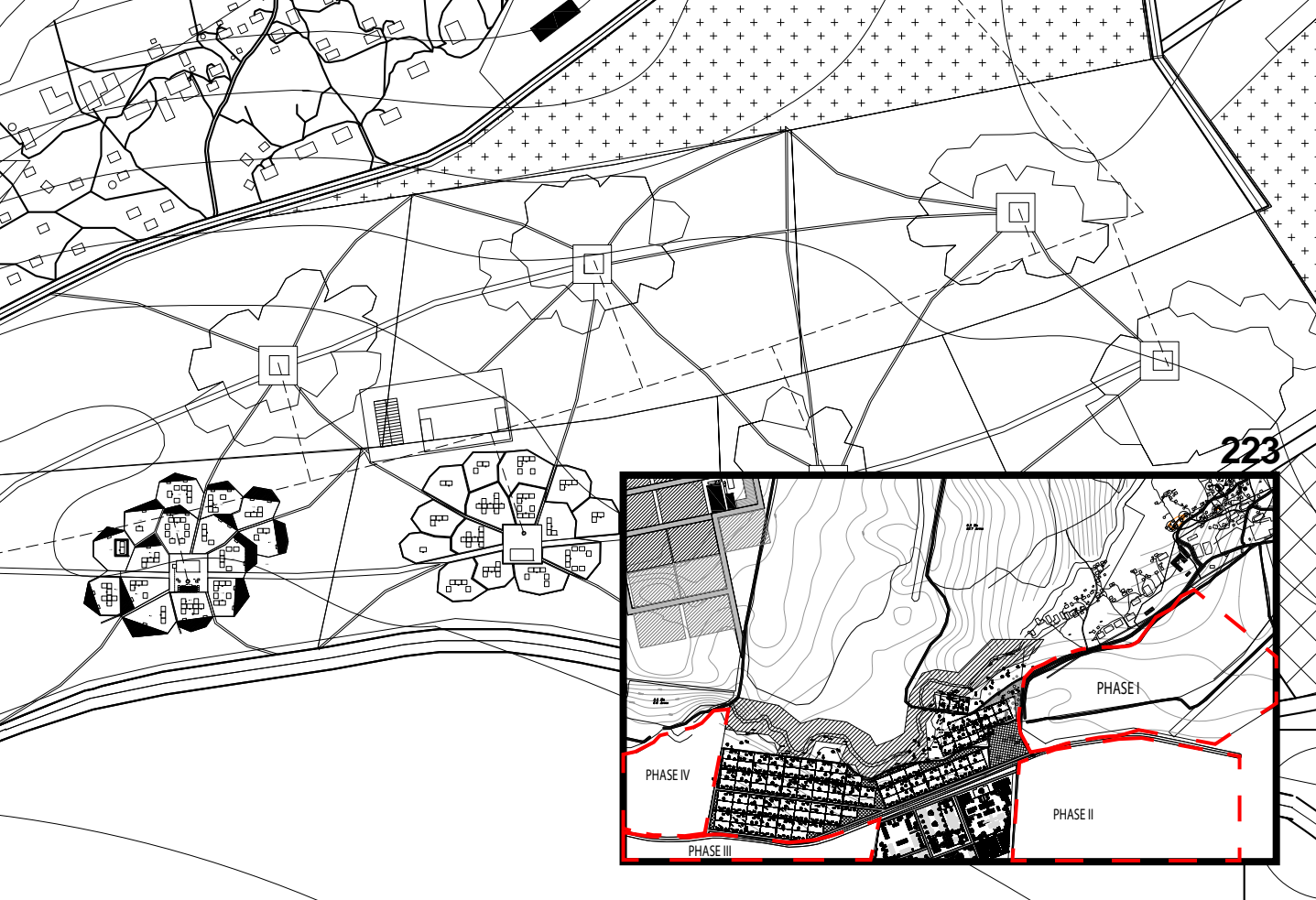
The document is almost finished. It tried to communicate as much as it could. Great effort has been taken to understand and explain the developers as well as inhabitants point of view. But how could this information contribute to the future remains unclear. For this reason the guidelines were formulated throughout the research. These are the principles specific for Mount Elgon. That doesn't mean that the approach and way of performing the action research in the field couldn't be adopted in other situations. Thus, the second ambition of this research is to formulate a method that provides a way to analyze the context and background in a cultural sensitive way. Hopefully this will encourage other developers to work in a similar way to improve situations they have to deal with.

The next move is to extract steps for future development from the research. In general three levels of action need to be taken.

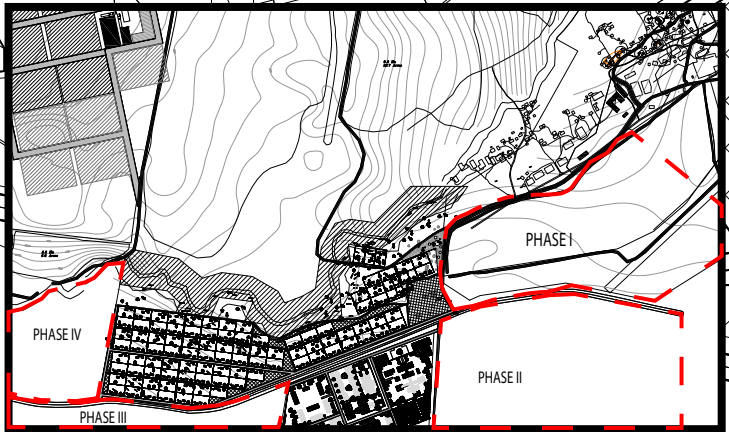
MASTERPLAN

For future development an area should be searched that is the most suitable for both the owner and inhabitants. Phase one is the only that is on ground already owned by the owners. Because land ownership is a long process this would be the best fitted area for the next development. The first project that should be established is a place for the inhabitants where they can meet and talk (community building). Development is a long slow process and the inhabitants should have a place where they have the ability to talk & work on their future together. This principle is based on the tree meetings in villages and has proven success in the Huruma project in Nairobi. From this central point they can start registering and building the different communities together. This will also be the centre were developers can gather with the inhabitants to discuss and support their future plans and development. At this point the community plots will be planned





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COMMUNITY BORDER

IMPROVED FURROW 200X400MM PROVIDE COMMUNITY WELL WITH WATER (± 0 /-3500 UNDER THE GROUND)

VEGETABLE GARDEN (-500MM FUNCTIONS AS WATER BASCIN

BAMBOO PIPE $\varnothing 400$ (WATER OVER FLOW)

BASIC TYPOLOGY

IMPROVED FURROW 400X800MM (± 0 /-3500 UNDER THE GROUND)

IMPROVED FURROW 200X400MM PROVIDE COMMUNITY

WELL WITH WATER (± 0 /-3500 UNDER THE GROUND)

CHAIRMAN COMPOUND FULL BASIC TYPOLOGY

COMMUNITY CENTRE AREA 400M2

COMMUNITY BUILDING 80M2

WATER RESERVOIR 1500X1500MM

BAMBOO PIPE $\varnothing 400$ (WATER OVER FLOW)

MAN ROAD 3000MM

COMMUNITY WELL $\varnothing 1500$ MM

PUBLIC TOILETS

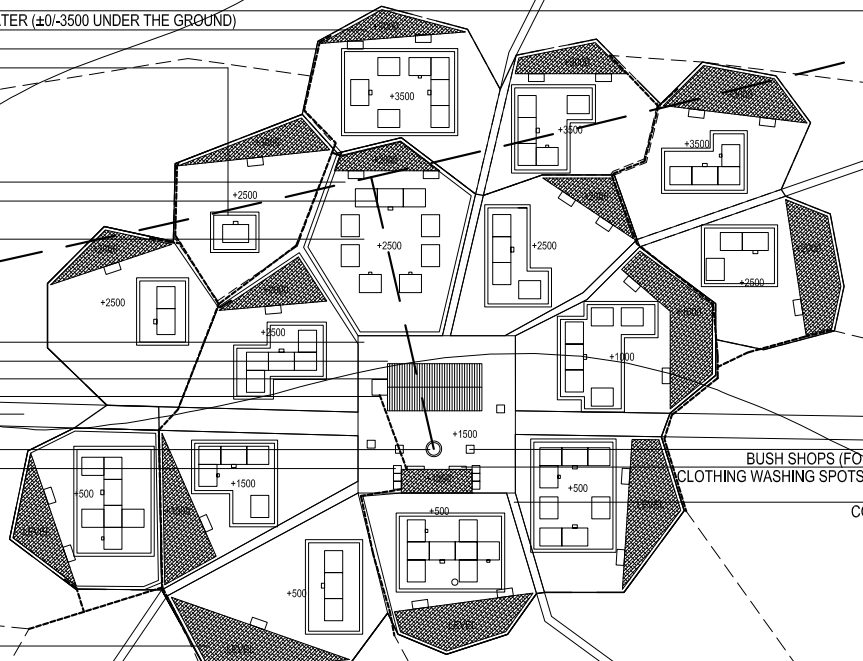
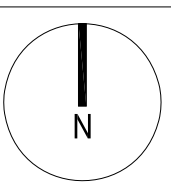
VEGETABLE GARDEN (-500MM FUNCTIONS AS WATER BASCIN

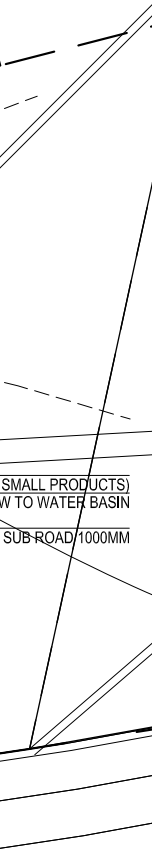
BAMBOO PIPE $\varnothing 600$ (EMERGENCY WATER OVER FLOW)

BAMBOO IRRIGATION PIPE $\varnothing 300$ (EMERGENCY WATER OVER FLOW)

BUSH SHOPS (FOR SELLING CLOTHING WASHING SPOTS OVERFLOW)

COMMUNITY



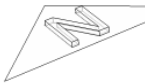


COMMUNITY PLAN

To prevent future problems in organization that inevitably will occur the community board and chairman will need to be reinstated. These representatives of the community will take decisions on behalf of the community and will make sure that everybody agrees with the decisions made. On the community plot set at the masterplan stage in which the community will first need to build a community building where they can gather. This will be done by all the inhabitants of that community and will function as an extra bounding process in the development. From this central position the inhabitants can start with setting out the family plots of the community. The road will naturally be formed by community inhabitants by walking to work, school, etc. In this way traditional natural way of forming a village will be supported.

FAMILY COMPOUND

For centuries the inhabitants have been constructing their own houses together with family, friends and village members. Dwellings of local materials were cheap and easy to get and because of the long tradition dwellings could be finished in record times. The current problem in their perspective is the amount of maintenance on the dwelling and that the materials used are hard to clean. For this reason a method should be developed that respects methods and materials currently used and only improves what the inhabitants would like to improve. In this way they make the step and choice themselves and the progress is corresponds with the inhabitants themselves and it's not based on western standards or perspective.





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GUIDELINES

The guidelines are rearranged by their scale, which are Urban and Architectural scale.

Urban:

GEOGRAPHY POSITION

- Through centuries farm workers placed themselves on the farm which was approved by the former owners. Some of the families that live on farm ground now aren't working for the farm anymore but still originate from the first families. Although the ground belongs to the farm these people and settlements can't be just removed and can only be asked to move overtime to a more suitable area for the farmer.
- The flow of new people to the camps should be stopped, which can only be done when the inhabitants start to understand the problem and will act together to stop the flow.
- A new piece of land should be given to the people by the owners as compensation. This community should also get its own community board and chairman. But more importantly also remain communicating with the developers.

GEOGRAPHY (infrastructure)

- Leave the formation of main roads to the inhabitants or make a case study on the most obviously routes that will established by the inhabitants in the camps.
- The informal infrastructure inside the communities should be formed by the communities themselves, based on agreements they make with each other.

ORGANIZATION (village)

- Every household should have one representative in the community board meeting
- Within every community there should be three people elected every 5 years to communicate development to the developers.

- A chairman should be appointed as ceremony leader, although he will be the advisor of the community decisions are made by the community as a whole. (to prevent the misuse of power which is seen in the current camps)

ORGANISATION (density)

- Set maximum amount of extensions to a family house (should not exceed the norm of 20-25%, based on plot size and the amount of horticulture needed per person)
- Set a border for development area on plot (the rest is meant as horticulture ground)
- Reinstate community principle to communicate additions to developers.

COSTS (amount)

- Community should build the houses themselves to press the costs
- Usage of only local materials

HABIT WALKING TO WORK AND SCHOOL TOGETHER

- An informal infrastructure should be formed with one main road leading to the farm and Chepchoina. (this is currently the main direction of the main road inside the camps)
- Motorized vehicles should be restricted from this internal main infrastructure.

HABIT(fetching water)

- This point is close the point mentioned by washing. A central water source should be provided to collect water in the centre of every community.

SOCIAL CULTURAL ACTIVITIES NATIONAL CELEBRATIONS

- In the community centre there should be a place covered which is large enough for all the inhabitants of the community. (most celebrations are currently celebrated in schools or

churches because the lack of such place inside the camps)

SOCIAL CULTURAL ACTIVITIES CIRCUMCISION

- The community should be able to decide where the chairman should live and how the route for procession should be.
- In the community centre there should be a covered place which is large enough to give place to all the inhabitants of the community.

SOCIAL CULTURAL ACTIVITIES BIRTH, DOWRY&MARRIAGE

- There should be a small church in the centre of the communities be provided where these official Christian ceremonies can be performed.
- In the community centre there should be a covered place which is large enough for all the inhabitants of the community for these activities (for 25 families maximum of 150).

ACTIVITY (meeting)

- Keep the open central living space in future development which is a meeting place for the different family members but also for people that shortly stop by.
- In the planning of water points and at the position of cultural ground is that these places are also used as meeting points and should have shady places to sit and talk.
Create activity places where children can play soccer or other sorts of activity.

ACTIVITY (religion)

- Reserve a central space in de community for celebrations and rituals
- Provide communal places and spaces that are funded from communal funding.

ACTIVITY (cleaning)

- The finish of floor and walls should be easy to clean but still have the characteristics of the

old materials (repellent, soft surface, easy to apply,etc.)

ACTIVITY (washing clothes)

- Create a central washing location per community should be created that is close to the dwellings but is still a place to gather around for young and old.
- Provide a small washing place in the back of the family compound to make sure that the families can also wash a few clothes at the end of the day.

FORM (single multiple)

- Set maximum amount of extensions to a compound.
- Set a border for development area on plot (the rest is meant as horticulture ground)
- Reinstate community principle to communicate additions to developers.

HABIT (relative)

- Reinstate community principle (community board and chairman)to regulate the flow of inhabitants and their relatives.

RELATIONSHIPS (family, friends, church, etc.)

- In general I would like to state that the developers shouldn't make any decisions in cultural and social sense for the inhabitants. These complex relations and ways of interaction are different for everybody and there is not one way of organizing them. Social space should be calculated as an amount to leave open for the community to fill in for themselves.

Architectural:

PROGRAM

- Boys and girls sleep separated after their 5-6th year.
- Around their 20s most of the children get married and move out of the family compound. So any development of structures for the children wouldn't have to last longer than 20 years.
- A method should be searched to still provide adult children with their own dwelling and to have a central living area for the whole family that has a semi enclosed communication to the surroundings.
- Entrance of the family dwelling should be positioned towards the general living space and from the public areas.
- Construction culture is an important feature of the communal identity.
- Any intervention or other types of decision by the developers should be avoided at any level.
- Because the internal organization and situation of every family is different there is not one suitable program or organization for everybody. The archetype should be adapted and organized by the inhabitants themselves.

PROGRAM (bathroom)

- Allow the temporary shower units (there is no possible objection to the units)
- Provide the new habitation with the possibility to have a shower inside the house.
- Position the shower or drainage tube close to a possible vegetable garden or if not possible to main drainage pipe of the village.

PROGRAM (toilet)

- The toilet should be placed outside the house

- The community has to decide where the sanitations should be placed per household
- Pit latrines should be positioned near vegetable garden so it can act as a fertilizer.

PROGRAM (bedroom)

- Providing an alternative separator inside the dwellings that improves privacy
- Develop a building system for walls that is also flexible and offers connectivity on outside wall at any given position.

PROGRAM (living room)

- Offer the possibility of an indoor living room but that can easily be opened towards the central outdoor living area.
- The central outdoor living area should only be partly enclosed to offer communication to the surroundings.

SPACE

- Inside the main family house there is almost no separation between the different functions and has much to say about the importance of inner family communication.
- Space enclosure and dwelling position are extremely important how the family communicates with each other and the surrounding families. Right now living rooms are more and more being included inside the family home, but it also decreases communication to the surrounding. In any way the family should be given the chance to organize their own family and the way they would like to communicate.

FORM (single multiple)

- Set maximum amount of extensions to a family house (should not exceed the norm of 20-25%, based on plot seize and the amount of horticulture needed per person)

- Set a border for development area on plot (the rest is meant as horticulture ground)
- Reinstate community principle to communicate additions to developers.

FORM (size&shape)

- Introduce a dwelling typology that can be built by the inhabitants themselves
- Develop a circular and rectangular modular brick that has a large amount of different dwelling sizes and shapes, which gives the inhabitants the freedom to create their own dwelling typology.

FAMILY SIZE

- The dwellings should be able to adapt to the family size
- The inhabitants should decide for themselves how many children they want and how much this can fit in the budget of the family. The developers can only explain consequences through education, the dwelling size shouldn't be restricted in order to make families smaller.

HABIT (relative)

- Reinstate community principle (community board and chairman) to regulate the flow of inhabitants and their relatives.

HABIT SLEEPING TOGETHER

- Sleeping together in the main family house should be integrated in the new development.
- Separation between the different sleeping places should be made of a light flexible material but that still gives enough privacy.

ACTIVITY (religion)

- Developed a dwelling extension as chapel

ACTIVITY (cooking)

- Provide a chimney system that is easy and cheap to build and also offers a low use of firewood and might also be used for internal heating.
- Make a proposal of different types and sizes of chimney and show possible positions on the compound.

COST LIFECYCLE

- A lifecycle analysis of current families should be placed to the future prediction in order to make an accurate calculation how long the dwelling should last.

MATERIALS

- Individual expression on external use of the dwelling should be as much as possible restricted to only decorative elements and no longer to status related objects. What should mean that the community has a standard archetype which functions as a white canvas. On this white canvas people can only make little decorative differentiation between them and other members of the community.
- Finishes and materials should be analysed on the function that they have in the dwelling. Some of the used materials increase the living quality of functions of the dwelling. By removing these traditional materials the softness of certain surfaces is lost and are there no elements left that could work as a repellent. For every material that you replace the functions
- Materials used on the outside give the inhabitants their identity. When applied among different inhabitants it increases the communal identity. Even finishes with a very low durability can be extremely durable when finished with a coating of paint or lime.
- For every part of the dwelling we should search for materials and construction methods

that come from the direct surrounding of the community. The best way to improve the average living quality of the dwelling we should only improve local constructions methods and materials.

MATERIAL: organic

- Create construction materials that are based on local products but have an enhanced durability and have a surface that is cleaned easily.

MATERIAL (durability)

- A more durable material is wanted and needed but a mechanical made product is not the solution. New local made products should be searched or stimulated to develop.
- The family dwelling will not have to be able to last longer than 80 years.
- Materials should be searched that do not need a lot of maintenance and are easy to clean.

MATERIAL FABRICATED

- Create construction materials that are based on local products and have innovative look. (in this way status and progress is not translated to money but the development of construction products and finishes)

SUSTAINABILITY

- Materialisation should be tuned to the availability in the area and the price. If not maintenance even small will cause major problems and will decrease the lifespan of even the most durable dwelling.
- I should be looking for an archetype that has a new look and higher durability, but we should be building it on local materials and based on the local identity that is created by the local vernacular archetype.

- The dwellings should only be constructed from natural local materials that breathe the local cultural identity.
- The sustainability of both material and method is reliant on the integrity of use of material and the way that construction is organized by the community. Because as long the community build themselves they will never need mechanically produced construction or materials.

FABRICATION

- Individual expression should be motivated to use decorative elements as much as possible and hopefully make the use of status related objects unnecessary . What should mean that the community has a standard archetype which functions as a white canvas. On this white canvas people can only make little decorative differentiation between them and other members of the community.
- Finishes and materials should be analysed on the function that they have in the dwelling. Some of the used materials decrease the living quality of functions of the dwelling. By removing these traditional materials the softness of certain surfaces is lost and are there no elements left that could work as a repellent. For every material that you replace the functions and characteristics should be copied as much as possible.
- Materials used on the outside give the inhabitants their identity. When applied among different inhabitants it increases the communal identity. Even finishes with a very low durability can be extremely durable when finished with a coating of paint or lime.
- For every part of the dwelling we should search for materials and construction methods that come from the direct surrounding of the community. The best way to improve the average living quality of the dwelling is by improving local constructions methods and materials.

CONSTRUCTION

- The process of constructing house is a tradition transferred over generations. It has made the rural villages to what they are unique, adapted and one. This should supported in any new development. It establishes community and identity but also keeps the construction culture.
- In the project the durability of the dwelling should remain the same because for most structures there is not really a reason that they should last longer. Most important fact is that the dwellings should take just a small amount of maintenance and are easy to clean.

CONSTRUCTION: mechanical

- Mechanical produced dwellings are wanted by the developers but doesn't suit the question of the inhabitants. The inhabitants developed a construction system over centuries and still breathes the identity of former generations. This is transferred from father to son and from mother to daughter. Aim should be to develop a system that only tries to enhance the use of the dwellings and decreases the amount of maintenance.
- Local constructions methods should be analysed and reused in the new proposed development.

CONSTRUCTION (manual)

- Let the community built themselves
- Use a method that is close to the traditional used one

- PAGE 3 Bekaert, G. (2004), *Architect and Architecture*, Rotterdam, p. 444-145
- PAGE 11 Abonyo, A. *Cultural Aspects of Housing: a Case of the Luo in Kisumu Town*, p. 4
- PAGE 12 Rapoport, A. (1969) *House Form and Culture*, London, Prentice-Hall, INC, p. 6
- PAGE 15 Smits, M. *Responsibility and public space 2010* (unpublished)
- PAGE 24 Habitat for humanity Kenya mission statement, <http://www.hfhkenya.or.ke/>
- PAGE 25 Habitat for humanity Kenya mission statement, <http://www.hfhkenya.or.ke/>
- PAGE 29 Rapoport, A. (1969) *House Form and Culture*, London, Prentice-Hall, INC, p. 129
- PAGE 30 Mumtaz, K. (1985) *A case for indigenous development*, Aga Khan award for Architecture, p. 2
- PAGE 42 Oliver, P. & Hayward, R. (1990) *Architecture: An invitation*. Basil Blackwell, p. 18
- PAGE 42 Oliver, P. (1987) *Dwellings: The House Across The World*. Phaidon, Oxford, p. 7
- PAGE 64 Smits, M. (2010) *Interview Bob Andersen (owner mount elgon orchards ltd.) unpublished*, p. 8

APPENDIX

INTERVIEW SWAHILI VERSION

Mahojiano

Lengo ni kutengeneza orodha ya desturi na dhamani za wakaaji wa siku za usoni wa kijiji ili ku bora wa watu na mikutano ya hadhara – ushirika kati ya shughuli za kibinafsi na za

MAELEZO YA KIBINAFSI

Majina:

Nambari ya uajiri:

Tarehe ya kuzaliwa:

Jinzia: Mme Mke

Mahali pa kuzaliwa:

(Iwe dhahiri iwezekanavyo)

HUDUMA YA UMA / MAELEZO YA TABIA ZA VIKUNDI

1. Kabila Lako?	
2. Dini yako?	
3. Mila/Desturi (Eleza kuhusu tamaduni na sherehe mulizo nazo (ya kijamii na ya uma)	
4. Je unanuiya kuhusika katika shughuli au sherehe gani za uma?	
5. Je hizi hufanyika wapi (ndani ya nyumba au nje)?	
6. Ikiwa ni nje, Je uwanja wako utatumika vipi? itahitaji kiasi gani ya uwanja? Je kuna vifaa	

vyovyote vitakavyo hitajika kuwepo?	
7. Ikiwa ni ndani ya nyumba je itahitaji nafasi kiasi gain, vifaa gain na kibanda cha aina gain?	
8. Je unawaza vipi kuhusu makabila mengine na kuishi karibu na wao?	
9. Je unaweza kutumia vitu vya uma pamoja na wao?	

TABIA ZA KIBINAFSI

10. Je familia yako ni kubwa kiasi gain?	
11. Je mnaishi ndani ya chumba kimoja au ni nyumba kadhaa?	
12. Je mnalala vipi (kila mtu na chumba chake? wanawake na wanaume wametengwa? Na je watoto?	
13. Je mnakulia wapi? Wote pamoja kama jamii? Pamoja na watu wengine?	
14. Je ni shughuli gain hufanyiwa nyumbani? Je mnapika nyumbani?	
15. Je jikoni na bafu ziko ndani ya chumba kimoja au nje? Je zinaweza kutumika pamoja na jamii zingine za kabila lako? Na je kabila zingine?	
16. Je unaonaje mahali pako pa sasa pa kuishi? Je unaipeleleza? Kwa nini? Je ungependa kuwe na mabadiliko gani?	

UHUSIANO NA MAJIRANI

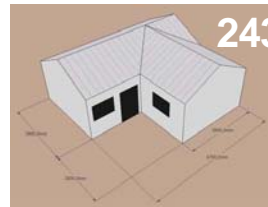
17. Je una majirani? Je ungependa kuwa na majirani? Je una uhusiano gain na majirani wako?	
18. Je ni uhusiano gani ungependa kuwe na majirani wako?	
19. Je ni shughuli gani unaweza kuhusisha majirani wako? Wa kabila lako? Wa makabila mengine?	

AINA ZA NYUMBA

1A



1B



2A



2B



Interview

Aim is to make a full inventory of customs and values of the future inhabitants of the village to provide the best organization of people and public functions. - organisation of private and public functions.

PERSONAL DATA

Name(s):

Employee number:

Date of birth:

Gender: Male Female

Region of birth:

Place of birth;
(As specific as possible)

PUBLIC FUNCTION / GROUP HABITS DATA

1. What tribe you belong to?

2. What is your religion?

3. Customs/Traditions (specify what kind of celebrations and rituals they have, how are these celebrated and where?)

4. What public events/ celebrations are you cultivating?

5. Where do those take place? Indoor or outdoor? Is there a communal place in the village where these take place? Where is this?

6. If you start living in the where should this communal place be? what size and shape?, any specific features that need to be there?

- If it's indoor, what capacity is needed, size, shape, what kind of enclosure (roof only/closed structure) and what is necessary equipment?
- What do you think of other tribes and living with them? Is there a tribe that you wouldn't like to have in the village and why?
- Could you share some public facilities with them? What do you think of public sanitation?

PERSONAL HABITS

10. What size is your family?

11. Do you live in one dwelling? Is it one structure or a few combined? Are these self-constructed houses or build by the farm?

12. Where do you sleep (and every member of family)? Men and women separated? Kids?

13. Where do you eat? Do you eat together with family, with other people?

14. What activities are being held at home? Do you cook at home? If outside is there a roof provided? What would you think of public cooking places?

15. Bathroom, living room, kitchen- are they inside or outside, can they be shared with other family of the same tribe or other tribe? Are these temporary structures?

16. How do you find your current living conditions? What do you like about them, What would you like to change. How? Is there any function you would like to have more in your house? Would you like to have some function out of your house?

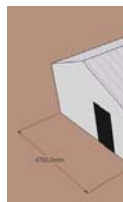
NEIGHBOURHOOD REL

17. What are your relations with (neighbours)? Would you m

18. What kind of relations wo

19. What activities could you s the same tribe, of other trib

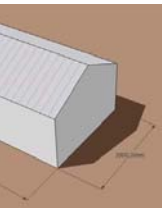
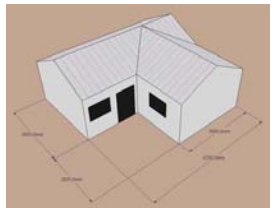


CHOISE ACCOMODATIO



QUESTIONS

Do you have any neighbours (do you have any neighbours and having neighbours?)	
Would you like to have with them?	
How do you share with your neighbour? (if any)	

ANSWERS

<p>1A</p> 	<p>1B</p> 
<p>2A</p> 	<p>2B</p> 

Interview

Aim is to make a full inventory of customs and values of the future inhabitants to provide the best organization of people and public functions. - organisation public functions.

PERSONAL DATA

Name(s): Samali R
Employee number: 1410
Date of birth: 1-8-1974
Gender: Male Female
Married? yes
Place of birth; (which district) ?

PUBLIC FUNCTION / GROUP HABITS DATA

1. What tribe you belong to?	Turkana
2. What is your religion?	Christian
3. Customs/Traditions (specify what kind of celebrations and rituals they have, how are these celebrated and where?)	Giving dowery Pastoralists weddings
4. What are the public events? Where are they celebrated?	Church leader
5. are the events Indoor or outdoor? Is there a communal place in the village where these take place? Where is this?	Indoor In the church
6. If you start living in the new village, where should this communal place be? what size?, any specific features that need to be there?	Andersen medical c ½ acre a church hospital sch

SHOWING 3 OF 25
REGULAR RESULTS

of the village
of private and

7. If it's indoor, what capacity is needed, size, shape, what kind of enclosure (roof only/closed structure) and what is necessary equipment?	¼ acre 20m by 35m Rectangle closed structure Keyboard, drums
8. What do you think of other tribes and living with them? Is there a tribe that you wouldn't like to have in the village and why?	To understand one another and have good relationship Nanda to be my neighbour because of their nature of life
9. Could you share some public facilities with them? What do you think of public sanitation?	Yes To promote it to avoid outbreak of diseases and germs.

PERSONAL HABITS

10. What size is your family?	6 children And parents
11. Do you live in one dwelling? Is it one structure or a few combined? Are these self-constructed houses or build by the farm?	Yes a few combined Self constructed
12. Where do you sleep (and every member of family)? Men and women separated? Kids?	In the house Wife and husband one room and children their own
13. Where do you eat? Do you eat together with family, with other people?	In the house Yes Yes
14. What activities are being held at home? Do you cook inside? If outside is there a roof provided? What would you think of public cooking places?	Growing vegetables Inside No outside Should be clean and properly arranged

entre
ool shop post

	No sharing Store for storage of cereals
16. How do you find your current living conditions? What do you like about them, What would you like to change. How? Is there any function you would like to have more in your house? Would you like to have some function out of your house?	Conductive with fresh air Free space No physical to be done Equipping it with furniture Growing vegetables and rearing goats

NEIGHBOURHOOD RELATIONS

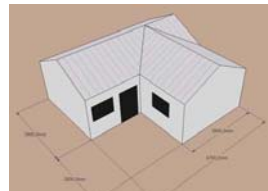
17. What are your relations with neighbours (do you have neighbours)? Would you mind having neighbours?	Good yes yes
18. What kind of relations would you like to have with them?	To love and helping each other in times of need
19. What activities could you share with your neighbour? (of the same tribe, of other tribe)	To talk over development or land To preach peace and unity

CHOOSE ACCOMODATION

1A



1B



Interview

Aim is to make a full inventory of customs and values of the future inhabitants of the village to provide the best organization of people and public functions. - organisation of private and public functions.

PERSONAL DATA

Name(s): Samuel T

Employee number: 489

Date of birth: 1968

Gender: Male Female

Region of birth:
Chepchoina

Place of birth:
trans-nzoia

PUBLIC FUNCTION / GROUP HABITS DATA

1. What tribe you belong to?	Bukusu
2. What is your religion?	Christian
3. Customs/Traditions (specify what kind of celebrations and rituals they have, (public/private))	Birthday parties Religious meetings
4. What public events/ celebrations are you cultivating?	none
5. Where do those take place? Indoor or outdoor?	Depends on the number of people
6. If it's outdoor, how should this space be organized, what size and shape, any specific features that need to be there?	A tent or shed would be erected

7. If it's indoor, what capacity is needed, size, shape, what kind of enclosure (roof only/closed structure) and what is necessary equipment?	10m2
8. What do you think of other tribes and living with them?	There is no problem
9. Could you share some public facilities with them? Which ones?	If there is no harm to me

PERSONAL HABITS

10. What size is your family?	6
11. Do you live in one dwelling? Is it one structure or a few combined?	2 houses
12. Where do you sleep (and every member of family)? Men and women separated? Kids?	All together
13. Where do you eat? Do you eat together with family, with other people?	We eat together also with visitors
14. What activities are being held at home? Do you cook at home?	We cook at home
15. Bathroom, living room, kitchen- are they inside or outside, can they be shared with other family of the same tribe or other tribe?	They are outside They can ben used together with other people
16. How do you find your current living conditions? What do you like about them, What would you like to change. How? Is there any function you would like to have more in your house? Would you like to have some function out of your house?	Where I stay is not a good place I would like a permanent house

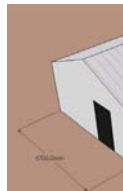
NEIGHBOURHOOD REL

17. What are your relations with neighbours)? Would you m

18. What kind of relations wo

19. What activities could you s the same tribe, of other trib

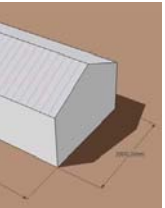
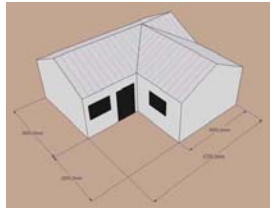


CHOOSE ACCOMODATIO



ATTENTIONS

With neighbours (do you have and having neighbours?)	Yes We assist each other where there is a problem
Would you like to have with them?	A good relationship
Share with your neighbour? (of ...)	Religious activities

CONCLUSION

1A 	1B 
2A 	2B 

POOR RESULT

Interview

Aim is to make a full inventory of customs and values of the future inhabitants to provide the best organization of people and public functions. - organisation public functions.

PERSONAL DATA

Name(s): Antony Wekesa Wamukota
Employee number: 330
Date of birth: 8/1/1978
Gender: Male Female
Married? Yes
**Place of birth;
(which district)** Trans nzoia

PUBLIC FUNCTION / GROUP HABITS DATA

1. What tribe you belong to?	Luhya
2. What is your religion?	Muslim
3. Customs/Traditions (specify what kind of celebrations and rituals they have, how are these celebrated and where?)	Circumcisions celebrated after two weeks in one's home
4. What are the public events? Where are they celebrated?	National days Celebrated in schools, church
5. Are the events indoor or outdoor? Is there a communal place in the village where these take place? Where is this?	Both indoor and outdoor There are no communal places (they would like)
6. If you start living in the new village, where should this communal place be? what size?, any specific features that need to be there?	Should be easily accessible from the village to cater for the demand of the community Retail shops butcheries, Emp


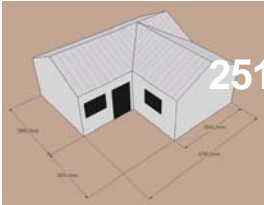


7. If it's indoor, what capacity is needed, size, shape, what kind of enclosure (roof only/closed structure) and what is necessary equipment?	Indoor and outdoor closed structures Equipment's grinding tools, fridge, solar panels, water tanks
8. What do you think of other tribes and living with them? Is there a tribe that you wouldn't like to have in the village and why?	Comfortable with all tribes
9. Could you share some public facilities with them? What do you think of public sanitation?	Yes, no problem with sharing public facilities

PERSONAL HABITS

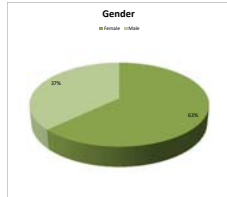
10. What size is your family?	Parents 3 children
11. Do you live in one dwelling? Is it one structure or a few combined? Are these self-constructed houses or build by the farm?	Yes, one structure constructed by the farm
12. Where do you sleep (and every member of family)? Men and women separated? Kids?	Sleep in one room (whole family)
13. Where do you eat? Do you eat together with family, with other people?	Eat as a family
14. What activities are being held at home? Do you cook inside? If outside is there a roof provided? What would you think of public cooking places?	Cooking and dining in the kitchen under the same roof
15. Bathroom, living room, kitchen- are they inside or outside, can they be shared with other family of the same tribe or other tribe? Are these temporary structures?	Bathroom outside Toilet shared with other families and other tribes Temporary structure
16. How do you find your current living conditions? What do you like about them, What would you like to change. How? Is there any function you would like to have more in your house? Would you like to have some function out of your house?	Not good, very few toilets, houses keep on needing repairs. Houses to be made permanent and good living spaces, toilets and bathrooms

17. What are your relations with neighbours (do you have neighbours)? Would you mind having neighbours?	Good relationship with the neighbours Would like to have more
18. What kind of relations would you like to have with them?	Help each other in planting and harvesting
19. What activities could you share with your neighbour? (of the same tribe, of other tribe)	Planting and harvesting

CHOISE ACCOMODATION

1A	1B
	
2A	2B
	
20. What house typology would you like	2A

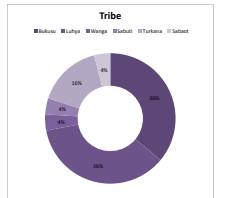
Gender	F	F	M	F	F	F	F	F	F	F	F	F	F	F	M	M	F	M	M	F	M	M	F	M	M	F	M	M	F	M	Sum
Female	1	1	0	1	1	1	1	1	1	1	1	1	1	1	0	0	1	0	0	1	0	0	1	0	0	0	1	0	1	17	
Male	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	0	1	1	0	1	1	1	1	10		



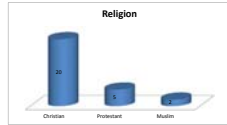
Marital status	Unknown	Unknown	No	Yes	Unknown	Unknown	Yes	Unknown	Yes	Yes	Unknown	Unknown	Yes	Yes	Yes	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Yes	Unknown	Yes	Unknown	Yes	Unknown	Sum
Married	0	0	0	1	0	0	1	0	0	1	1	0	0	1	1	1	0	0	0	0	0	1	0	1	0	1	0	10
Not married	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Unknown	1	1	0	0	1	1	0	1	0	0	0	1	1	0	0	0	1	1	1	1	1	1	1	0	1	0	1	16



Tribes	Bakawa	Bakawa	Bakawa	Bakawa	Bakawa	Lupya	Lupya	Lupya	Wanga/Juh/Quhuti	Luhya	Turkana	Turkana	Bakawa	Luhya	Bakawa	Lupya	Luhya	Luhya	Luhya	Luhya	Saboti	Turkana	Bakawa	Turkana	Bakawa	Lupya	Sum	
Bakawa	1	1	1	1	1	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1	0	9
Lupya	0	0	0	0	0	1	1	0	0	1	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	9
Wanga	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Saboti	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Turkana	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	4
Saboti	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1

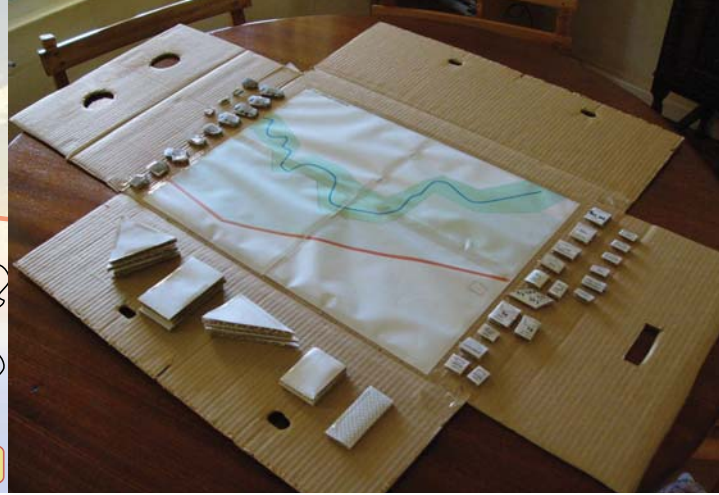
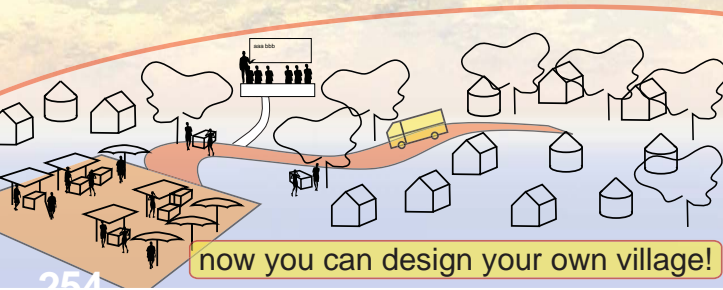


Religion	Christian	Christian	Christian	Christian	Christian	Protestant	Christian	Christian	Protestant	Protestant	Christian	Christian	Christian	Christian	Muslim	Christian	Christian	Christian	Christian	Protestant	Muslim	Christian	Christian	Christian	Christian	Christian	Protestant	Sum
Christian	1	1	1	1	1	0	1	1	0	1	1	1	1	1	0	1	1	1	1	1	0	1	1	1	1	1	1	20
Protestant	0	0	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	1	1	0	0	1	0	0	0	0	0	3
Muslim	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	2

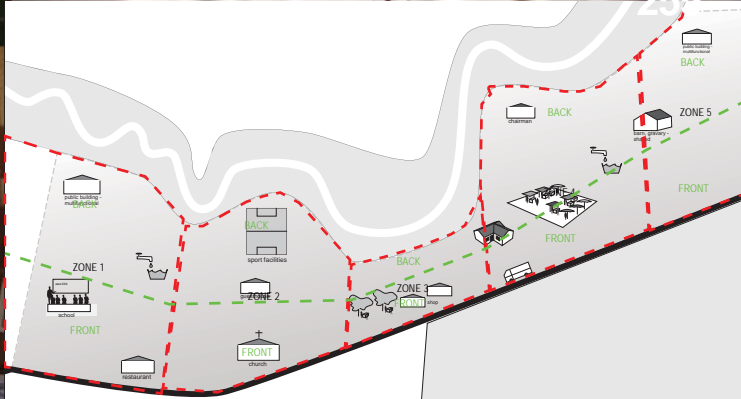
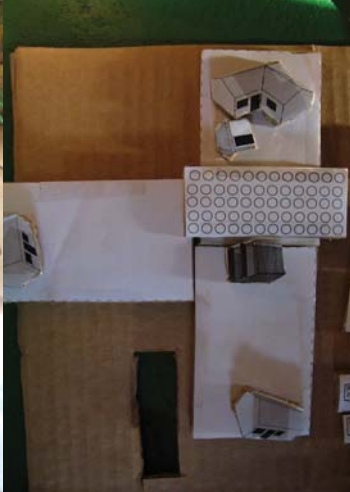


KIJIJI CHA NDOTO

the dream village



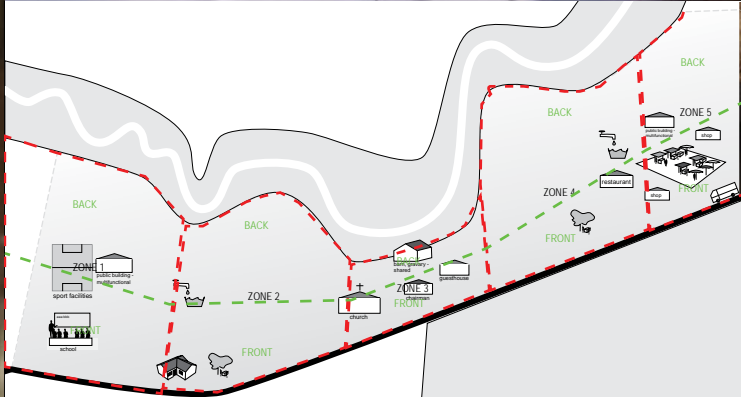
SHOWING 3 OF 6
BOARDGAME



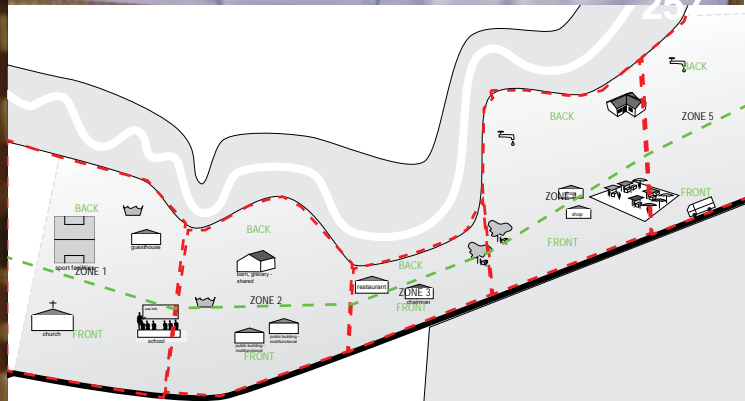
EMPLOYEE 166



256

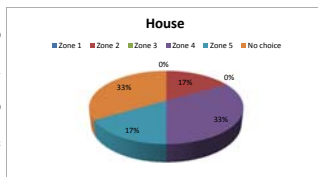


EMPLOYEE 1528

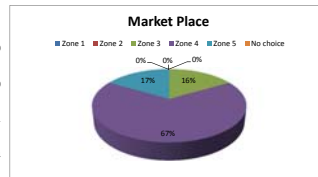


EMPLOYEE 1081

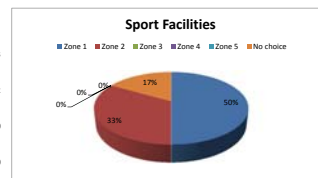
House	4B	5B	-	-	4B	2F	Sum
Zone 1 Back	0	0	0	0	0	0	0
Zone 1 Front	0	0	0	0	0	0	0
Zone 1	0	0	0	0	0	0	0
Zone 2 Back	0	0	0	0	0	0	0
Zone 2 Front	0	0	0	0	0	1	1
Zone 2	0	0	0	0	0	0	0
Zone 3 Back	0	0	0	0	0	0	0
Zone 3 Front	0	0	0	0	0	0	0
Zone 3	0	0	0	0	0	0	0
Zone 4 Back	1	0	0	0	1	0	2
Zone 4 Front	0	0	0	0	0	0	0
Zone 4	0	1	0	0	0	0	1
Zone 5 Back	0	0	0	0	0	0	0
Zone 5 Front	0	0	0	1	0	0	1
Zone 5	0	0	1	1	0	0	2
No choice							2



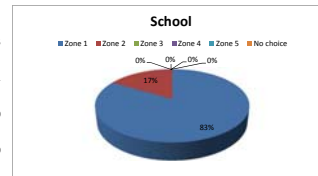
Market Place	4B	4F	3F	4B	4F	5F
Zone 1 Back	0	0	0	0	0	0
Zone 1 Front	0	0	0	0	0	0
Zone 1	0	0	0	0	0	0
Zone 2 Back	0	0	0	0	0	0
Zone 2 Front	0	0	0	0	0	0
Zone 2	0	0	0	0	0	0
Zone 3 Back	0	0	0	0	0	0
Zone 3 Front	0	0	1	0	0	1
Zone 3	0	0	1	0	0	1
Zone 4 Back	1	0	0	1	0	2
Zone 4 Front	0	1	0	0	1	2
Zone 4	0	0	0	0	0	0
Zone 5 Back	0	0	0	0	0	0
Zone 5 Front	0	0	0	0	1	1
Zone 5	0	0	0	0	0	0
lo choice	0	0	0	0	0	0



Sport Facilities	2B	2B	-	1F	1B	1B	
Zone 1 Back	0	0	0	0	1	1	2
Zone 1 Front	0	0	0	1	0	0	1
Zone 1	0	0	0	0	0	0	0
Zone 2 Back	1	1	0	0	0	0	2
Zone 2 Front	0	0	0	0	0	0	0
Zone 2	0	0	0	0	0	0	0
Zone 3 Back	0	0	0	0	0	0	0
Zone 3 Front	0	0	0	0	0	0	0
Zone 3	0	0	0	0	0	0	0
Zone 4 Back	0	0	0	0	0	0	0
Zone 4 Front	0	0	0	0	0	0	0
Zone 4	0	0	0	0	0	0	0
Zone 5 Back	0	0	0	0	0	0	0
Zone 5 Front	0	0	0	0	0	0	0
Zone 5	0	0	0	0	0	0	0
No choice	0	0	1	0	0	0	1



School	1F	1F	2B	1B	1B	1F	
Zone 1 Back	0	0	0	0	1	1	2
Zone 1 Front	1	1	0	0	0	1	3
Zone 1	0	0	0	0	0	0	0
Zone 2 Back	0	0	1	0	0	0	1
Zone 2 Front	0	0	0	0	0	0	0
Zone 2	0	0	0	0	0	0	0
Zone 3 Back	0	0	0	0	0	0	0
Zone 3 Front	0	0	0	0	0	0	0
Zone 3	0	0	0	0	0	0	0
Zone 4 Back	0	0	0	0	0	0	0
Zone 4 Front	0	0	0	0	0	0	0
Zone 4	0	0	0	0	0	0	0
Zone 5 Back	0	0	0	0	0	0	0
Zone 5 Front	0	0	0	0	0	0	0
Zone 5	0	0	0	0	0	0	0
No choice	0	0	0	0	0	0	0



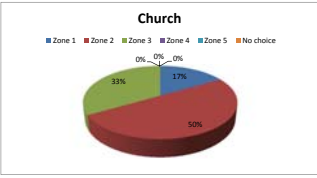
Church	2F	2B	3B	2F	1F	3F
Zone 1 Back	0	0	0	0	0	0
Zone 1 Front	0	0	0	0	1	0
Zone 1	0	0	0	0	0	0
Zone 2 Back	0	1	0	0	0	0
Zone 2 Front	1	0	0	0	1	0
Zone 2	0	0	1	0	0	0
Zone 3 Back	0	0	0	0	0	0
Zone 3 Front	0	0	0	0	0	1
Zone 3	0	0	0	0	0	0
Zone 4 Back	0	0	0	0	0	0
Zone 4 Front	0	0	0	0	0	0
Zone 4	0	0	0	0	0	0
Zone 5 Back	0	0	0	0	0	0
Zone 5 Front	0	0	0	0	0	0
Zone 5	0	0	0	0	0	0
No choice	0	0	0	0	0	0

Public Building - Multifunctional	1B 5B	2F 4B	3B	2F 5B	2x 2F	1B 5B
Zone 1 Back	0	0	0	0	0	1
Zone 1 Front	0	0	0	0	0	0
Zone 1	0	0	0	1	0	0
Zone 2 Back	0	0	0	1	0	0
Zone 2 Front	0	1	0	0	2	0
Zone 2	0	0	1	0	0	0
Zone 3 Back	0	0	1	0	0	0
Zone 3 Front	0	0	0	0	0	0
Zone 3	0	1	0	0	0	0
Zone 4 Back	0	0	0	0	0	0
Zone 4 Front	0	0	0	0	0	0
Zone 4	0	0	0	0	0	0
Zone 5 Back	1	0	0	1	0	1
Zone 5 Front	0	0	0	0	0	0
Zone 5	0	0	0	0	0	0
No choice	0	0	0	0	0	0

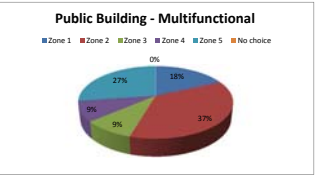
Barr, Gravay - Shared	5B	2B	-	2B	2B	3B
Zone 1 Back	0	0	0	0	0	0
Zone 1 Front	0	0	0	0	0	0
Zone 1	0	0	0	0	0	0
Zone 2 Back	0	1	0	1	1	0
Zone 2 Front	0	0	0	0	0	0
Zone 2	0	0	0	0	0	1
Zone 3 Back	0	0	0	0	0	0
Zone 3 Front	0	0	0	0	0	0
Zone 3	0	0	0	0	0	0
Zone 4 Back	0	0	0	0	0	0
Zone 4 Front	0	0	0	0	0	0
Zone 4	0	0	0	0	0	0
Zone 5 Back	1	0	0	0	0	0
Zone 5 Front	0	0	0	0	0	0
Zone 5	0	0	1	0	0	0
No choice	0	0	0	0	0	0

Matatu Station	4F	5F	3F	4F	5F	5F
Zone 1 Back	0	0	0	0	0	0
Zone 1 Front	0	0	0	0	0	0
Zone 1	0	0	0	0	0	0
Zone 2 Back	0	0	0	0	0	0
Zone 2 Front	0	0	0	0	0	0
Zone 2	0	0	0	0	0	0
Zone 3 Back	0	0	0	0	0	0
Zone 3 Front	0	0	1	0	0	0
Zone 3	0	0	0	0	0	0
Zone 4 Back	0	0	0	0	0	0
Zone 4 Front	1	0	0	1	0	0
Zone 4	0	0	0	0	0	0
Zone 5 Back	0	0	0	0	0	0
Zone 5 Front	0	1	0	0	1	1
Zone 5	0	0	0	0	0	0
No choice	0	0	0	0	0	0

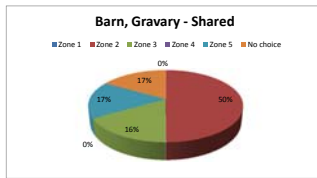
0
1
1
2
1
1
0
0
0
0
0
0



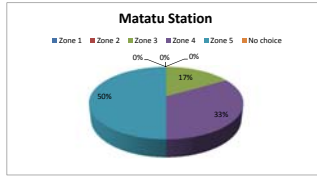
2
0
1
3
1
0
1
1
0
3
0
3
0



0
3
1
0
0
1
1
1
1



0
0
0
0
1
0
2
0
3
0
0



Restaurant

	1F	2B	3F	4B	3B	4F	0
Zone 1 Back	0	0	0	0	0	0	0
Zone 1 Front	1	0	0	0	0	0	1
Zone 1							
Zone 2 Back	0	1	0	0	0	0	1
Zone 2 Front	0	0	0	0	0	0	0
Zone 2							
Zone 3 Back	0	0	0	0	1	0	1
Zone 3 Front	0	0	1	0	0	0	1
Zone 3							
Zone 4 Back	0	0	0	1	0	0	1
Zone 4 Front	0	0	0	0	0	1	1
Zone 4							
Zone 5 Back	0	0	0	0	0	0	0
Zone 5 Front	0	0	0	0	0	0	0
Zone 5							
No choice	0	0	0	0	0	0	0

Guesthouse

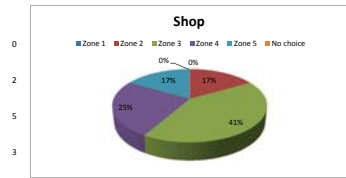
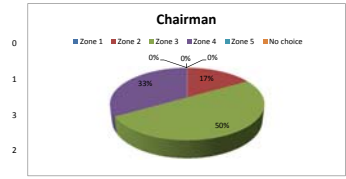
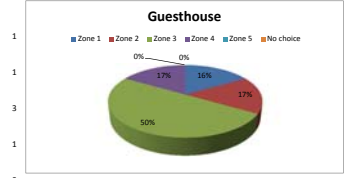
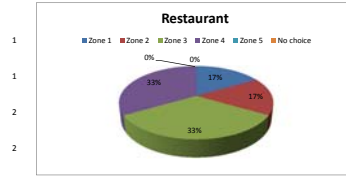
	2B	3F	3B	4B	1B	3F	1
Zone 1 Back	0	0	0	0	0	1	0
Zone 1 Front	0	0	0	0	0	0	1
Zone 1							
Zone 2 Back	1	0	0	0	0	0	1
Zone 2 Front	0	0	0	0	0	0	0
Zone 2							
Zone 3 Back	0	0	1	0	0	0	1
Zone 3 Front	0	1	0	0	0	1	2
Zone 3							
Zone 4 Back	0	0	0	1	0	0	1
Zone 4 Front	0	0	0	0	0	0	0
Zone 4							
Zone 5 Back	0	0	0	0	0	0	0
Zone 5 Front	0	0	0	0	0	0	0
Zone 5							
No choice	0	0	0	0	0	0	0

Chairman

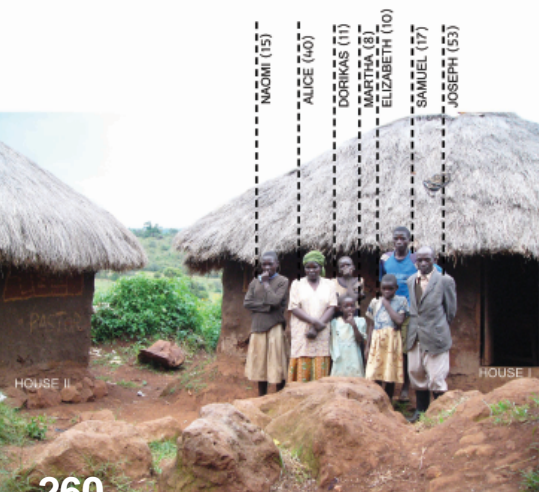
	4B	4B	2B	3B	3F	3F	0
Zone 1 Back	0	0	0	0	0	0	0
Zone 1 Front	0	0	0	0	0	0	0
Zone 1							
Zone 2 Back	0	0	1	0	0	0	1
Zone 2 Front	0	0	0	0	0	0	0
Zone 2							
Zone 3 Back	0	0	0	1	0	0	1
Zone 3 Front	0	0	0	0	1	1	2
Zone 3							
Zone 4 Back	1	1	0	0	0	0	2
Zone 4 Front	0	0	0	0	0	0	0
Zone 4							
Zone 5 Back	0	0	0	0	0	0	0
Zone 5 Front	0	0	0	0	0	0	0
Zone 5							
No choice	0	0	0	0	0	0	0

Shop

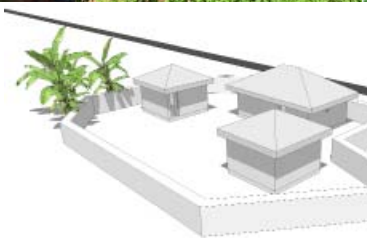
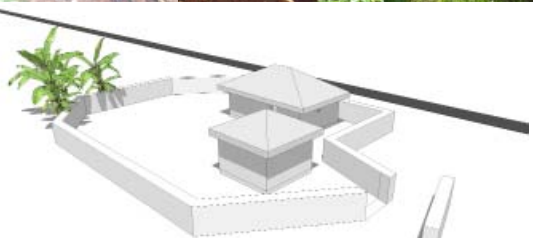
	2x 3F	3F 4B	2F 3F	2x 3B	4B 4F	2x 5F	0
Zone 1 Back	0	0	0	0	0	0	0
Zone 1 Front	0	0	0	0	0	0	0
Zone 1							
Zone 2 Back	0	0	0	0	0	0	0
Zone 2 Front	0	1	1	0	0	0	2
Zone 2							
Zone 3 Back	0	0	0	2	0	0	2
Zone 3 Front	2	0	1	0	0	0	3
Zone 3							
Zone 4 Back	0	1	0	0	1	0	2
Zone 4 Front	0	0	0	0	1	0	1
Zone 4							
Zone 5 Back	0	0	0	0	0	0	0
Zone 5 Front	0	0	0	0	0	2	2
Zone 5							
No choice	0	0	0	0	0	0	0



0
0
2
5
3
2
2



260



FAMILY OBSERVATION



261

Family members





Pastor Joseph (father 53)	House I
Alice (mother 40)	House I
Samuel (17)	House II
Naomi (15)	House III
Dorikas (11)	House III
Elizabeth (10)	House III
Martha (8)	House I

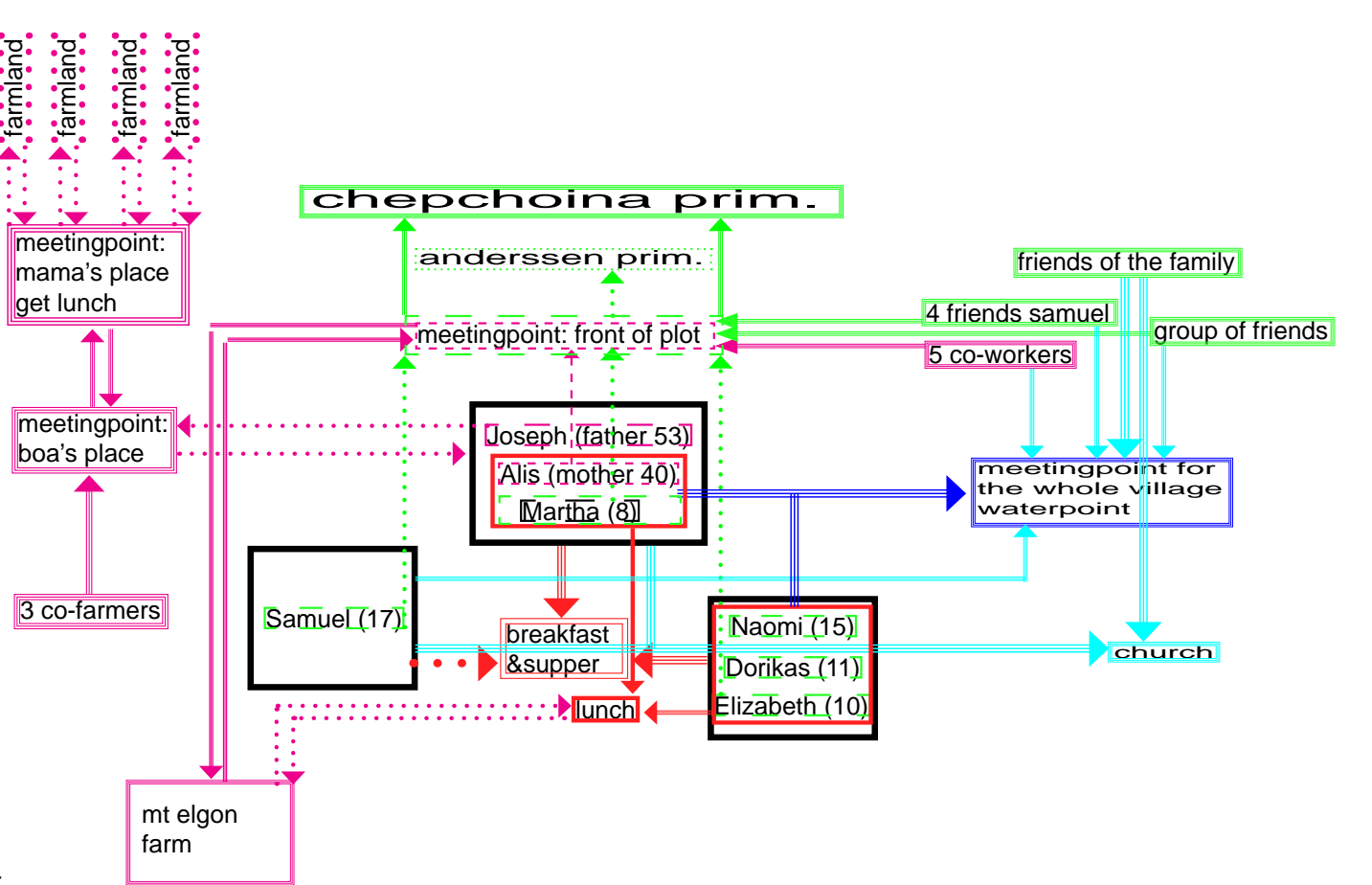
Joseph Monday to Saturday

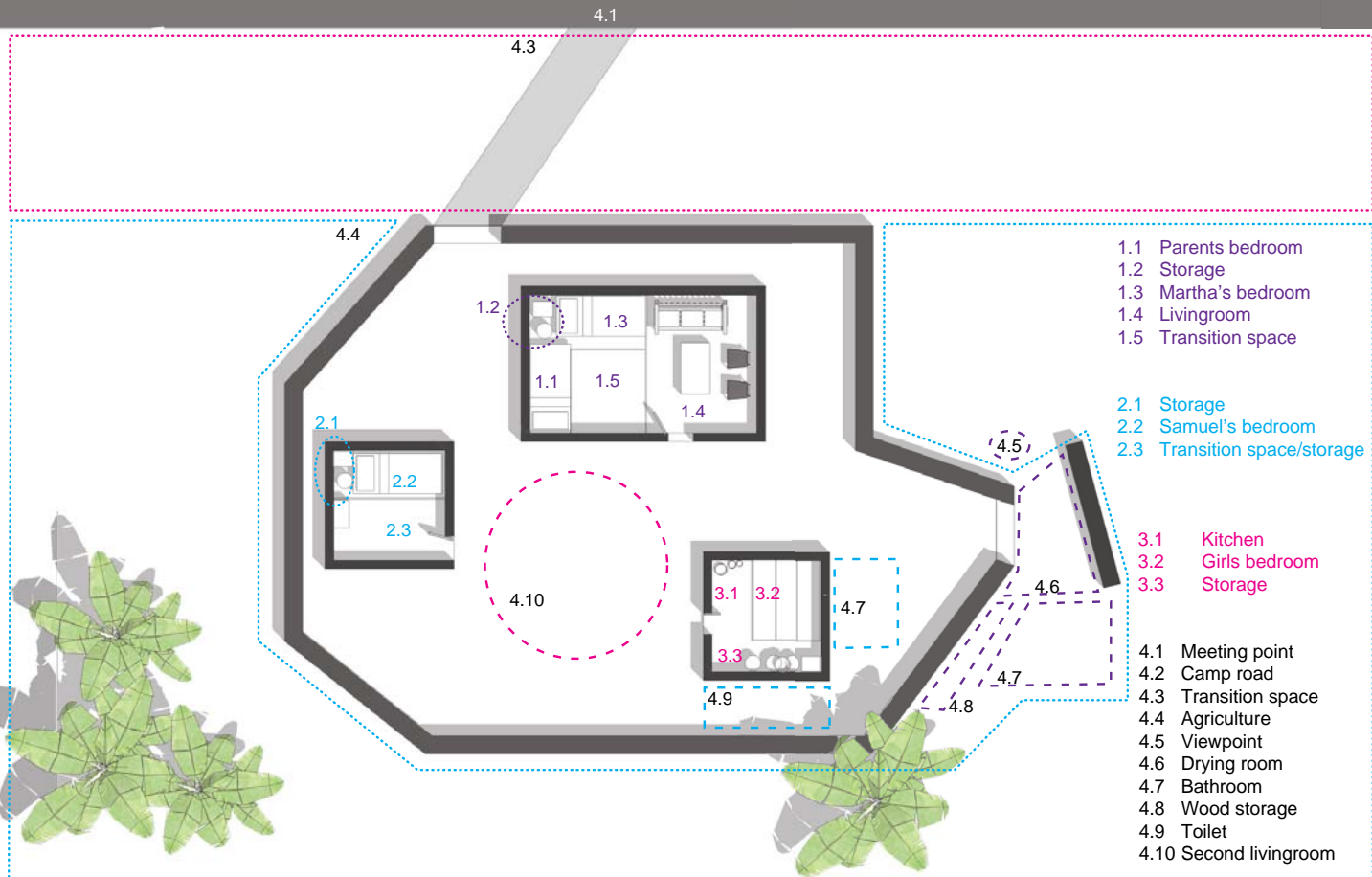
6:00	Waking up Place 1.1
6:00-7:00	Taking a pee in the bush Place 4.9 Eating porridge and drink strong tea Place 1.4 or 4.10 (weather) Play with children Place 1.4 or 4.10 (weather)
7:00	Going to work on the land (bike) The farm is near mount elgon and is one hectare (onions and mais)
7:15	Meeting three friends from chepchoina region at Boa's place (a house at the road to Kitale)
7:45	Go to mama's place near the farm land to get their lunch.
8:00	Leave individually to their farmlands
13:00	Lunchtime (eating githery (beans and mais) underneath a tree.
16:30	Collecting firewood from the nearby forrest
17:00	Come back to mama's place and leave off back to Boa's place
17:20	Arrive at Boa's place say goodbye and leave off to home
17:45	Back home
18:00-18:30	Having supper Place 1.4 or 4.10 (weather)
18:30-20:00	Wash himself Place 4.7
20:00-20:30	Get undressed into sleeping clothes Place 1.5
20:30	Go to sleep Place 1.1

Alice Monday to Saturday

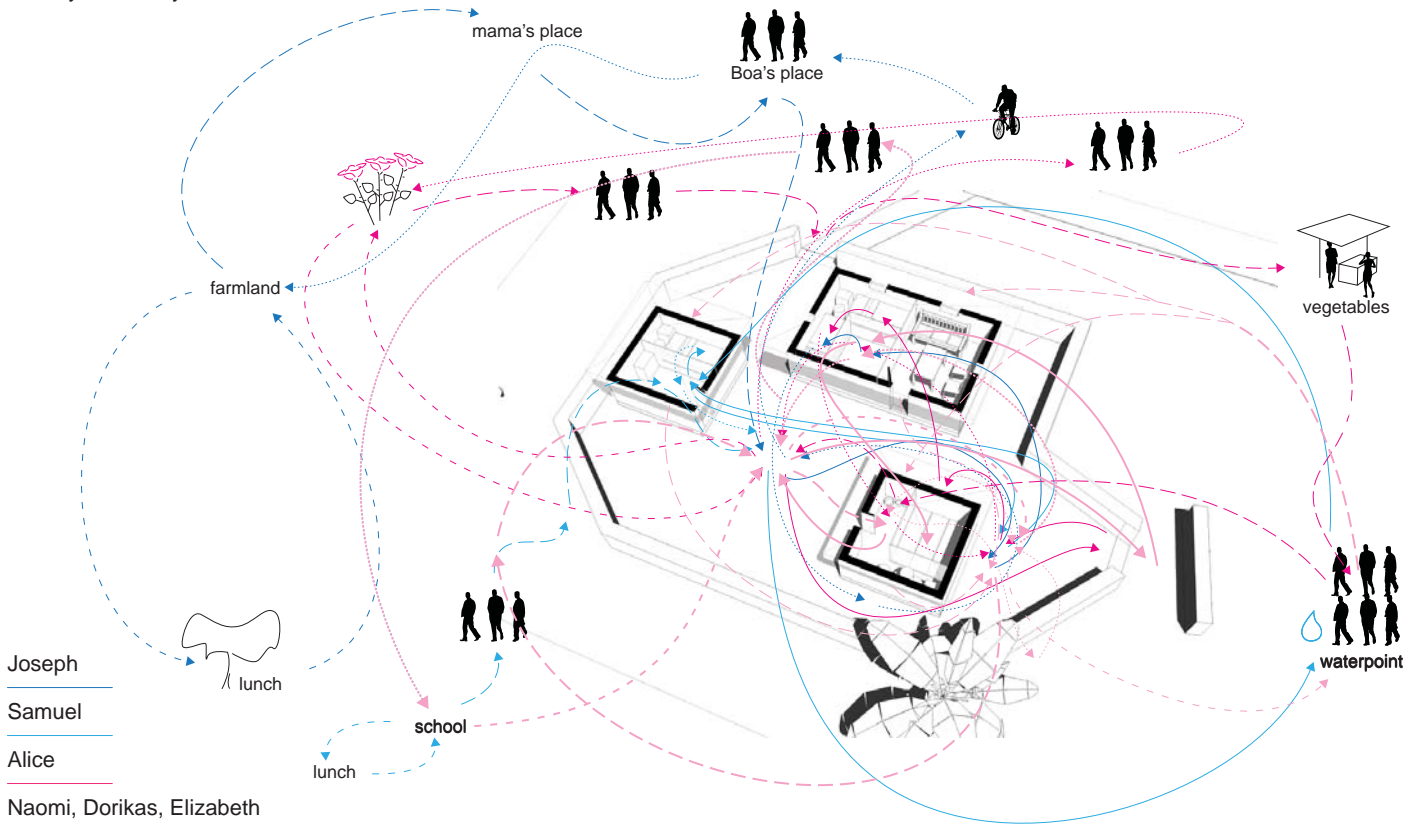
5:00	Waking up Place 1.1
5:00-6:30	Go to kitchen make fire Place 3.1 Set a pot of water on the fire for tea and porridge Place 3.1 Washes herself behind kitchen and Martha Place 4.7 Dressing up Martha Place 1.5 Cutting vegetables for lunch (ugali or githery) Place 4.10
6:30	Lock of the houses Leave to work Meet friends and co-workers in front of the house. Leave to work Place 4.1 Works in the green houses (rose cutter)
12:30	lunch time Leaves from the farm alone Prepares lunch for the children (accept Samuel) Place 3.1
13:30	Leaves of to the farm alone again
16:00	End of working day leaves together with co-workers and friends
16:15	Arrives back home and leaves to the vegetables lady in town Fetch water for supper and washing

	work
	school
	getting water
	leisure





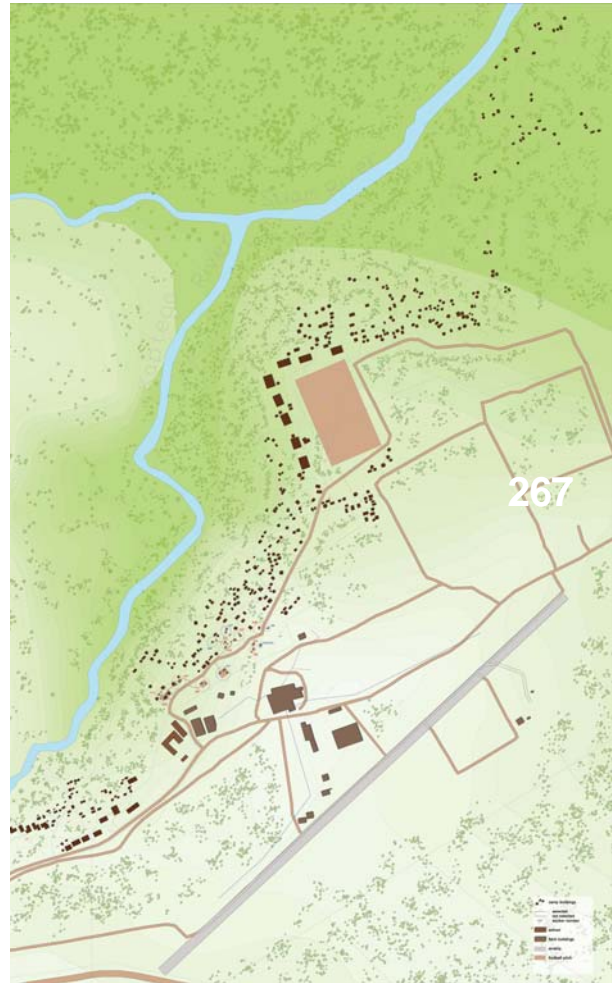
monday - saturday routes



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CAMP MAPS WORKED UP



CAMP MAPS

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PERMANENT STRUCTURES



TEMPORARY STRUCTURES



