

# North Dakota State University

## Graduate School

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**Title**

THE REFUGEE CAMP EVOLVED: HYPER-MODERN URBANISM VS VERNACULAR URBANISM

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**MASTER OF ARCHITECTURE**

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THE REFUGEE CAMP EVOLVED: HYPER-MODERN URBANISM VS VERNACULAR  
URBANISM

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## **ABSTRACT**

With an ever-increasing number of displaced people, the world has seen a constant need for basic human necessities such as food, water, and shelter. Refugee camps are intended to be necessary, quick solutions to house displaced people. However, many camps can turn into human storage facilities and living conditions can feel like a prison. Tradition and culture are often overlooked when setting up refugee camps.

Over time, the refugee camp may evolve into a more permanent settlement. How can we guide the hyper-modern urban evolution of a refugee camp into a more sustainable, culturally sensitive refugee settlement? My thesis explores the line between modern and vernacular urbanism and proposes a solution that provides order, sustainability, and scalability while also taking a close look at the culture of South Sudanese refugees in the Agojo Refugee Settlement located in Northern Uganda.

This thesis explores a more vernacular and sustainable approach to urbanism as a refugee camp becomes a settlement.

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## **1. THE REFUGEE CAMP**

What is a refugee camp? Should it be created with intent of being temporary or should it be made to be durable, long-lasting, and withstanding? Many refugee camps end up being established for much longer than anticipated. Many individuals and communities will spend decades living in refugee camps, not ever getting to revisit their former lives as non-displaced persons. Often, camps are not designed to be long-lasting, but rather short-term solutions which can quickly become unfit for living and unsustainable. Many camps are designed with the intent of being human storage facilities and will neglect the culture and the tradition of the community it is attempting to provide for.

What does the ideal refugee camp look like? The very first page in the UNHCR Emergency Handbook for Site Planning states that alternatives to refugee camps should be considered whenever possible (UNHCR Emergency Handbook, *Site Planning for Camps*, 2020). To put it quite simply, the ideal refugee camp is one that never needed to exist in the first place. There is nothing ideal about a refugee camp. It is a group of people in limbo. They have lost their homes and, in many cases, their identities and their purpose as individuals. This is why I believe it is of the utmost importance to adhere to and consider culture and tradition as much as possible when designing refugee camps.

## **2. FIELD RESEARCH**

My thesis project will take place in Northern Uganda in a refugee settlement called Agojo. I had the opportunity and privilege to visit Agojo Settlement this past December 2023 for a few weeks. I have also been actively involved with a humanitarian outreach group in this area since 2019 and have visited this area three times now. I have been around various South Sudanese communities over the past 6 years or so. I have grown to understand the culture and

have been able to meet with refugees and learn firsthand some of the struggles they face on a day-to-day basis. I have also learned more about the inner workings of a refugee camp.

## **2.1. The Site**

According to the UNHCR, Agojo was established in 2016 and is home to over 3,500 refugees from South Sudan. Due to consistent, ongoing political conflict and civil war, thousands of individuals have continued to seek refuge in Uganda to escape violence and persecution. Agojo is nearest to the city Adjumani which is home to more than 200,000 refugees from different places (UNHCR, *Agojo Settlement HLP Factsheet*, 2019).

Agojo is built on a dry, rocky ridge with the highest elevation point being the main road that travels north and south. A valley exists on either side with lush unutilized land to the east and the Nile River just under 5 miles to the northwest. Agojo is about 1.5 miles long from the north to the south and less than 0.5 miles wide running east to west.

Agojo is organized by district. There is a community district in the middle of the settlement along the main east and west road. This district is home to a school, a market, an orphanage, a soccer field, and other entities that provide some kind of service or product to the larger community.

To both the north and south of the community district, you will find residential districts with family plots put into place by the UN. Each residential block is made up of a 10x10 grid of family plots each equaling 100'x100' or about 30 meters by 30 meters. Each family or group of people are assigned one of these plots depending on the number of individuals.





Figure 1. Aerial view of Agojo Settlement (Google Maps, 2024)



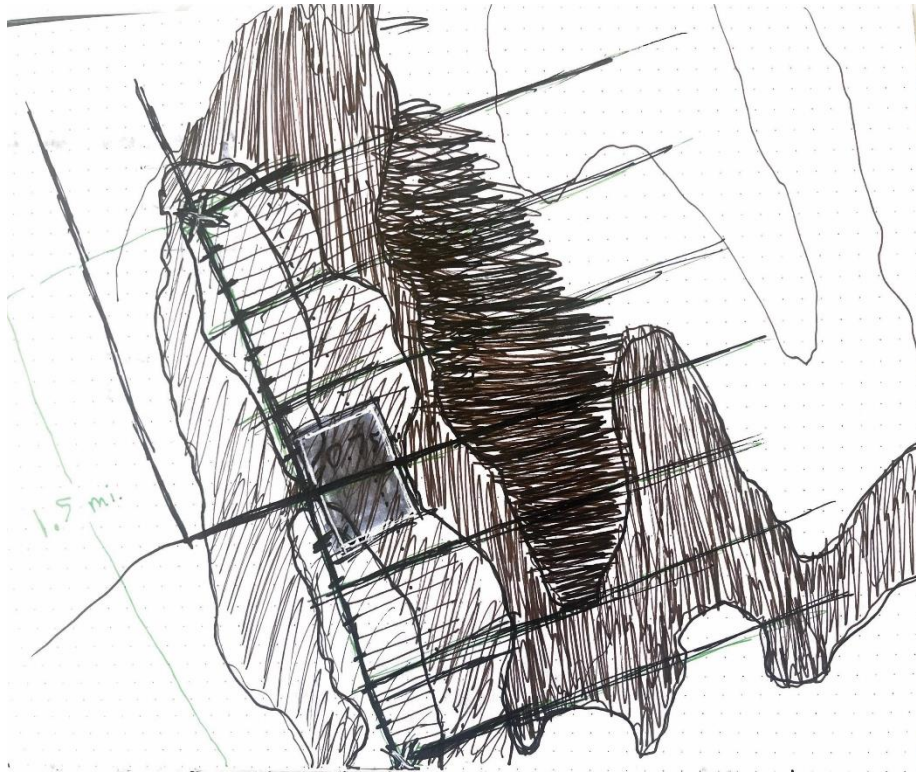


Figure 2. A topographical sketch of Agojo Settlement (Meidinger, 2024)



Figure 3. Aerial view of 10x10 residential block in Agojo Settlement (Google Maps, 2024)

## 2.2. Process VS Place

A refugee camp as a process and a refugee camp as a place are both different things. I believe it is important to distinguish both and recognize each as its own entity to better understand the context of my thesis. I believe there is a slight misconception about refugee camps as far as what they are what they become. Of course, the refugee camp is a highly nuanced and political idea and can vary depending on social, political, and environmental climates. Take the tent for instance. In a warmer, dry climate, the tent exists to be a necessary, quick, and cheap solution to provide shelter for individuals. Some may see pictures of a refugee camp shortly after its inception and see rows of ragged tents all in a line or a very strict grid formation. On an urban scale, I believe this grid system to be dehumanizing and it can make conditions feel like a prison.



Figure 4. Displaced Palestinians in Gaza (Amra, Ashraf, 2023)

Speaking more on the tent and the process of a refugee camp, I have come to the belief that a refugee “camp” is simply “step one” in a process to achieve some kind of goal. Again, this

goal can be very nuanced depending on several factors including but not limited to environmental, social, and political conditions. This goal can be reintegration into society, migration elsewhere, or permanent living. Many studies show that refugee camps are typically established for longer than anticipated. According to the UNHCR, generations of people may grow up in a single camp (UNHCR, 2024). With regards to my thesis, I will be looking at how a refugee camp evolves into a more permanent refugee settlement and how this process can be guided. In the case of my project the goal will be to guide the evolution of a camp into a more sustainable “refugee settlement”. In the case of my project, the refugee “settlement” is merely a product of a refugee “camp”.

At the conception of Agojo refugee camp, when refugees first showed up, they were given some provisions; usually a jerry can, some cooking utensils, and some food rations such as beans, lentils, or flour. They are given a tent and a plot of land nearby where they can begin developing a more permanent place of living. This is the process of a ‘refugee camp’. Refugees are expected to become self-sustaining while being provided with limited means.

### **2.3. Empower VS Enable**

I want to provide a caveat that many things in my thesis are bigger than what Architecture can achieve. But Architecture can provide a means to people and empower individuals and communities for generations. I believe it is also important to think about issues that may not be related to Architecture to get a more well-rounded understanding of the situation. This allows us to better empathize with and meet the needs of the people we are trying to help. Empowerment is key. Architecture can only do so much, but it can provide a foundation.

I believe the tent to be one of the least enabling things that the UN does to benefit refugees. With regards to rations or education, many times refugees are put in a position where

they are reliant on the UN, and it creates a cycle of enabling that does not benefit anyone in the long run. Refugees may depend on the UN for food rations and cooking supplies and the UN will continue to hand out resources without trying to create more sustainable solutions such as providing the means for refugees to support themselves.

### **2.3.1. Housing**

As far as housing goes, I believe tents may be the right way to provide aid to refugees in Agojo, at least starting out. The tent of course is not a sustainable solution, but it imbues a certain kind of motivation for refugees to begin working toward a means of creating their own, more permanent shelter. This is a powerful thing to cultivate in a group of people who have essentially lost their purpose. Stagnation is a difficult thing to avoid with groups of refugees and it becomes very harmful to an entire group of people who have essentially lost everything. So, in this regard, I believe the tent to be an empowering way to inspire individuals to do something more for themselves and create a sense of pride, purpose, meaning, and ownership.

Earth brick huts topped with grass thatch roofs are commonplace and they are a sustainable option for refugees. Bricks are made on site and grass can be gathered nearby for roofing material. These huts, or 'tukulus', are surprisingly cool and simple to construct and can last for decades if they are maintained well. Tukulus are typically used as a place to sleep and store your belongings. It is not the case that people would spend time during the day within these structures as time during the day is spent outside.





Figure 5. A tukulu with replacement bundles of grass thatch roofing material (Meidinger, 2018)

The problem lies in the urban scale organization. Planning and organization are rarely enforced, or they are neglected in camps, which can quickly lead to poor living conditions and will eventually turn into slums. Careful urban planning can mitigate these challenges and is imperative to a healthy sustainable community.

### **2.3.2. Food Rations**

Every month or so, the UN provides families with a choice between a small wage or food rations, the amount depending on the number of people within that family structure. Some people may use the wage to buy other food or supplies such as clothes, shoes, medicine, or other necessities. Most people take the food rations; and therein lies a problem.

I was able to speak with several refugees in Agojo and one thing that was agreed upon by everyone was the fact that there was not enough food, nor the means to cultivate food as the environment is dry, rocky, and inadequate. Fertile farmland is available nearby for rent, but it is

too expensive for refugees to invest in. Not to mention the time it takes to grow crops and the money needed for seed and other farming tools. I believe this is a classic “give a man a fish” problem, and the UN is acting as an enabler towards refugees and forcing them into a cycle that they cannot get out of.

Families have no choice but to take the ration and it is not empowering them. Of course, people need to eat, but the UN is not solving the problem and in the long run, more resources are being used and consumed. To foster sustainability and growth in a camp, farmland is a necessity. It would not only provide individuals with food, but with work, meaning, purpose, and reason, all of which may have been lost in the process of becoming a refugee. Refugees should be given the means to support themselves and in the long run this will benefit new generations as well as humanitarian aid groups such as the UN.

### **2.3.3. Water**

The UNHCR emergency handbook talks about equitable access to resources. Water is always in short supply and the quality may be questionable. This problem can be solved by continuing to drill wells. It is a simple and sustainable solution. Many international humanitarian groups make this their primary focus, and it always benefits a vast number of people.

A portion of individuals, typically children, in Agojo Settlement may have to walk for miles to get to the nearest well and in turn must carry heavy jerry cans of water back that same distance. There is always a need for more wells, and they should be spaced adequately and fairly in order to provide water for individuals in a convenient fashion.

Water collection from rain could also be utilized, even though it doesn’t rain often, when it rains, it comes down in large quantities. With grass being the most common roof material, thatch roofs do not make it ideal to collect rain from individual dwellings, but larger community

spaces such as schools, markets, or churches could be constructed with rain collection in mind. Tin roofs are quite common for these larger community spaces and could easily have rain collection implemented into the design of these buildings.

Water towers would also be useful in storing and potentially distributing water to families throughout the camp. Agojo is located on a ridge at the highest elevation point in the area, right next to a valley. Water collection could happen at the highest within the settlement and with the use of gravity, could be distributed through the settlement and as a means of irrigation into the valley where ideal farmland is located.

#### **2.3.4. Educational System**

The education system Agojo Settlement faces a problem very similar to that of the food situation. The UN provides teachers who are paid very low wages and often are met with a severe language barrier. These teachers are expected to teach 200 kids at a time who may not even understand the same language. Many teachers do not stay as they accept different jobs elsewhere with higher wages and better conditions. On the other side of it, families are expected to pay very high tuition fees for their children to even go to school.

I believe the solution to the educational system is also like the food situation. Rather than teach children directly, I believe we should teach individuals how to teach. This would eliminate the need to continuously bring in outside individuals that may not last very long anyway. By training teachers, we are again empowering individuals and giving them purpose and meaning. By training teachers, we empower these individuals to empower children and we create a cycle of sustainable empowerment.



### **2.3.5. The Right Way to Help Refugees**

What is the right way to help refugees? The more time I spend thinking about and reflecting on this question, the more I begin to think that perhaps the best way to help people in dire need is perhaps very limited ‘direct’ help. Let me explain.

Referencing back to my comments about providing food to refugees. Of course, people need to eat. People need water. But Agojo refugees and humanitarian groups are stuck in an enabling cycle. Refugees are given food, but they are not given the means to provide for themselves. They become reliant on rations that feed them for weeks but eventually end up back at where they started.

Everything that we do for refugees should be through a lens of sustainability. We want refugees to succeed in supporting themselves and not be reliant on others. This perhaps may take a bit of tough love, but in the long run it benefits everyone for generations.

We need to help refugees help themselves.

### **2.4. The Problem**

The problem that this thesis attempts to solve has to do with the lack of urban planning cohesion in Agojo Settlement. At its inception, a strict grid was implemented by the UNHCR as per usual refugee camp fashion. Each family is given a plot based on the number of people in their group. The grid is implemented to provide structure and order to the lives of those who have lost all structure and order in their lives. However, the grid does not consider the values, traditions, and cultural behaviors of the refugees in Agojo. There is a conflict between the hyper-modern way of urban planning and the vernacular way of traditional urban planning.

The way people organize themselves within that grid structure makes the grid seem almost redundant. I believe that without any kind of structure or urban planning cohesion, slums will eventually occur as more people move in and the population grows.

How can we guide the hyper-modern urban evolution of a refugee camp into a more sustainable, culturally sensitive refugee settlement? My thesis explores the line between modern and vernacular urbanism and proposes a solution that provides order, sustainability, and scalability while also taking a close look at the culture of South Sudanese refugees in the Agojo Refugee Settlement located in Northern Uganda.

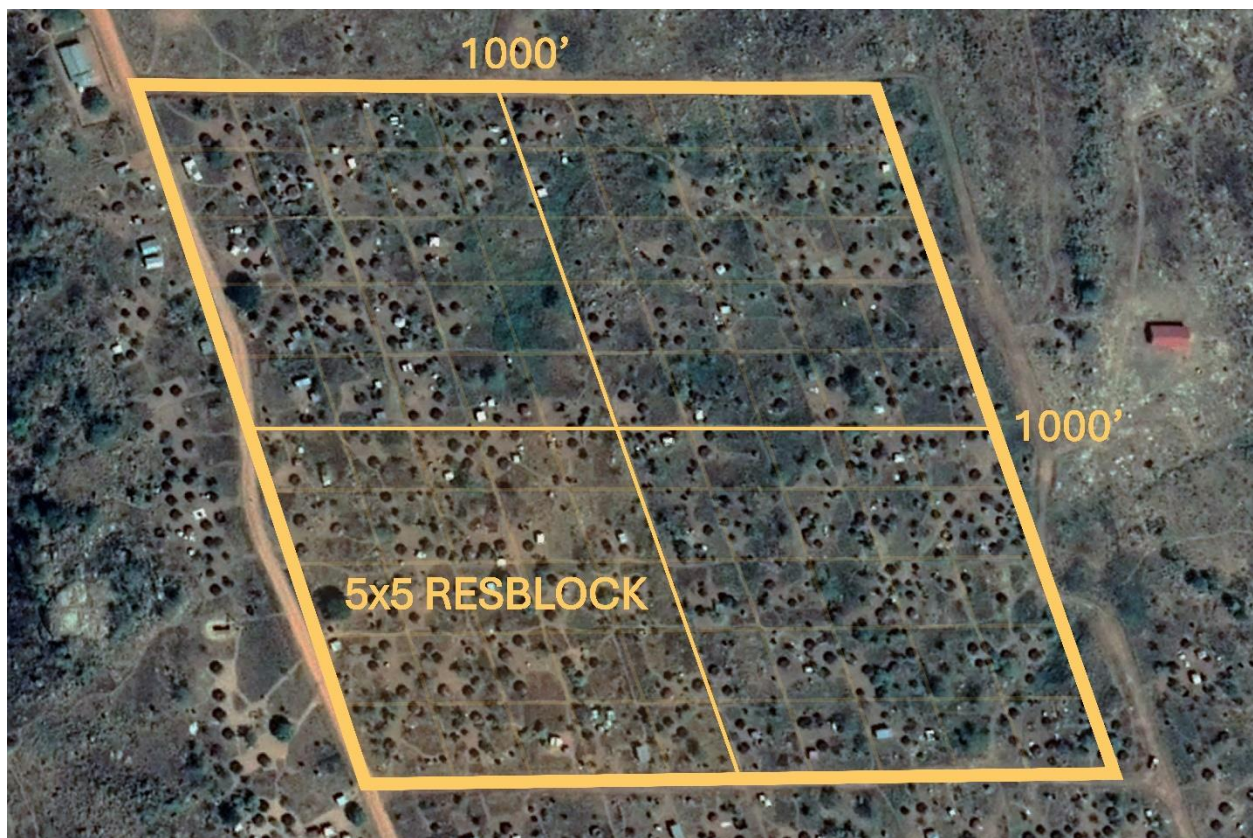


Figure 6. An annotated residential district in Agojo (Meidinger, 2024)

## 2.5. The Culture

The culture in North Africa is one of the most diverse in the world. There are more tribes and customs than anywhere else on Earth. There are some things that I have observed within the South Sudanese community over the past 6 years.

First of all, Ugandans and Sudanese alike, are very welcoming people. You will always be greeted with a handshake by everyone you meet and will be met with the hospitable warmth that emanates at the core of Sudanese culture. In line with this hospitality, everyone is made to feel included, and you will be offered food, water, and a place to stay whenever you visit someone. Sudanese people will always strive to ensure you are comfortable and that your needs are met.

Community is arguably the most important element of Sudanese culture. In American culture, there is much more of a focus on the individual and individual needs and desires. However, in Sudanese culture, the idea of the individual is not as profound. Everyone is family. Everyone is a cousin, a brother or sister, or an auntie or uncle, even if not related by blood. Your neighbor is your family. If your cousin by blood grows up with you and you have a close relationship with them, chances are they will be referred to as your brother or sister. This community dynamic speaks to the welcoming inclusivity values that are held so deeply by Sudanese communities. When one person falls, the community is there to pick them back up. You will always find support within your community. Social isolation is very uncommon in Sudanese culture, as you will always find yourself surrounded by your community which is your family.



Figure 7. A group of people gathered under a mango tree (QuintiniusGrin, 2019)

With welcoming, hospitable, community values, it is no surprise that gathering is a huge part of life in Sudanese culture as well. Whether it be for mourning, for celebration, or even in just everyday life, people are always gathered, typically in the shade, often in a circle formation. Sudanese are very formal and social people that will never turn down a chance to come together without needing a bigger reason to gather. Gathering is just a part of life.



### 2.5.1. Slums

Kampala is the capitol city of Uganda, and it is also the largest with around 5 million people within the city and the surrounding areas. With over 60% of the city's residents living in slums, I think it's an important facet to look at how a slum district can come to exist and how it is perhaps reflective of the culture.



Figure 8. A slum district in Kampala, Uganda (Google Maps, 2024)

When a place has a huge influx of people and the infrastructure can not support the number of individuals, the lack of planning and scalability will quickly result in slums. This is the case for Kampala. Many areas of the city will find tin lean-tos pieced together like a tight-fitting puzzle with little to no breathing room for anything more than tight circulation space. Finding open space or green space is a rarity in many areas.

Slums are typically always attributed to being nothing but a negative outcome of poor planning. Slums are never considered good. However, when the culture is taken into account, we

can see some parallels between slums and what the culture values. Being that everyone is a neighbor with everyone and within very close proximity of one another, a social boundary has been broken down. Stronger social and community ties are found within these slum districts because everyone is so close to each other physically, it is hard to avoid this kind of relationship between individuals on a larger scale, community level.

In this regard, slums are a sort of reflection of the culture. Or perhaps the culture is reflective of the slums?

### **3. THE PROPOSAL**

To reiterate: how can we guide the hyper-modern urban evolution of a refugee camp into a more sustainable, culturally sensitive refugee settlement? Considering the existing site conditions and the culture, I have a proposed solution to the problem at hand. I believe some kind of structure is necessary to provide sustainable order and structure to refugee camps, but the culture needs to be addressed and given consideration. My solution attempts to blend the two methods of thinking and reasoning and strives to meet in the middle.

It is my intent to keep a strong cultural, community tie among individuals and families, while still maintaining a level of structure and order.

My proposal is a replacement for the 5x5 family plot block. Each Residential district is made up of a quantity of four 5x5 family plot blocks (1000' x 1000'), with each individual plot being 100' x 100'. It is important to recognize that the nuclear family unit is not the norm in this area of the world. Again, you will find many find elders, aunts, uncles, cousins, brothers, and sisters within each family unit. The organization within this unit typically consists of a larger tukulu for whoever is in charge of that plot, typically adults or elders; perhaps a newborn may be dwelling there as well. Closest to the main tukulu, you will find the girls; perhaps one or two

dwellings closest to the elders in order to be better protected. You will find smaller tukulus used for cooking supplies or storing other belongings. The boys are generally closest to the entrance of the plot and farthest away from the elders and girls. They typically enjoy their independence and are able to further keep an eye on things to ensure better overall protection for the family plot. You will find latrines and showers in an area away from all the living quarters.

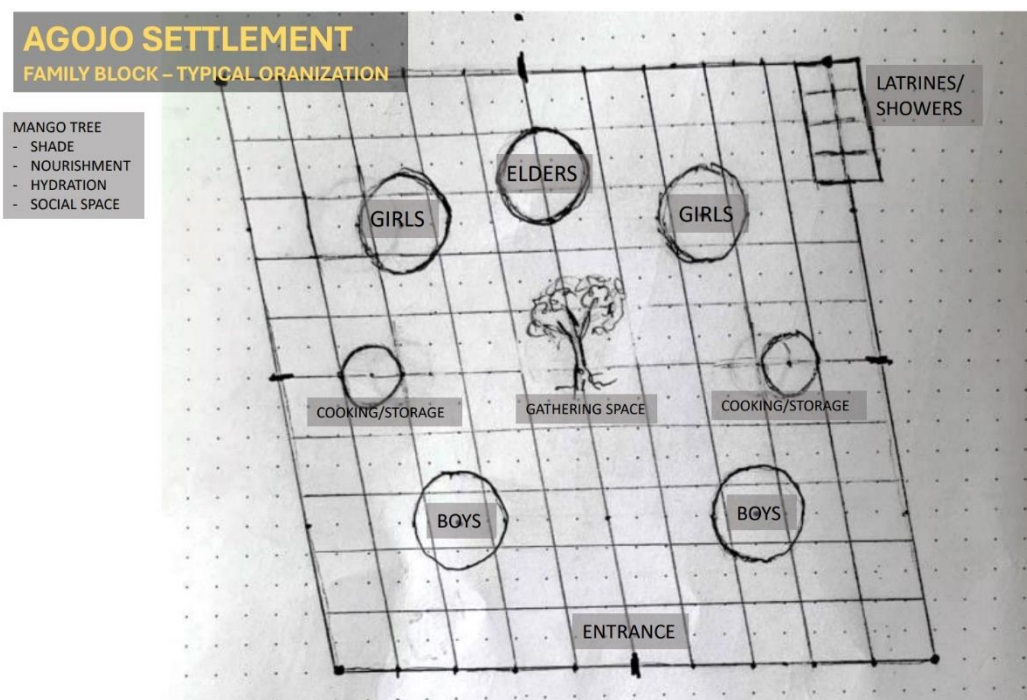


Figure 9. A sketched family block proposal considering the typical layout of a Sudanese family structure and dynamic; 100' x 100' (Meidinger, 2024)



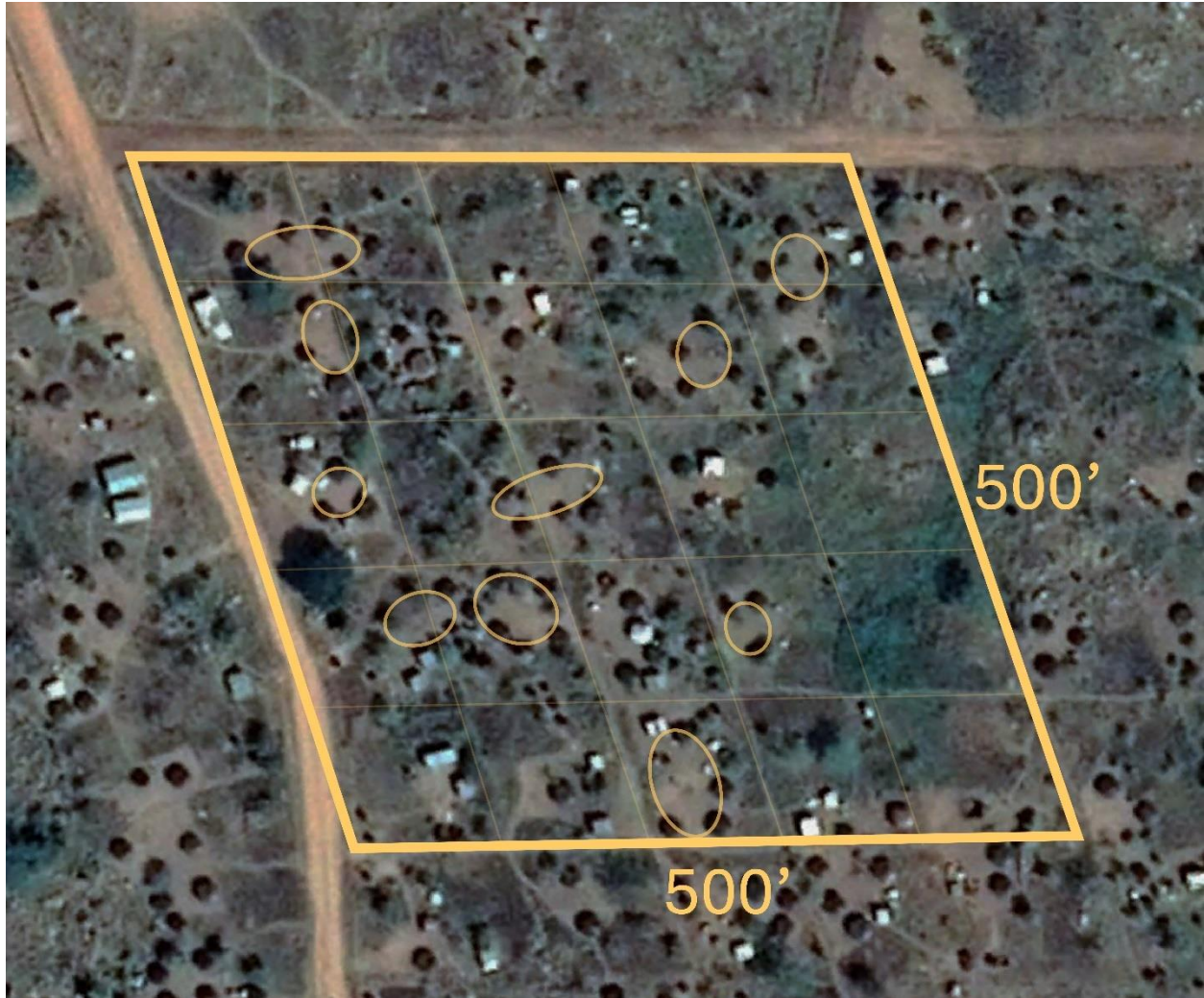


Figure 10. An annotated analysis of a 5x5 residential block in Agojo (Meidinger, 2024)

My proposal is based on the analysis of the preexisting site organization and a thorough observation of the culture. Within the grid structure put into place by the UNHCR, people will typically organize themselves in a circle, creating an interior focused gathering space that could be considered as a type of living room. People will typically be gathered in this space throughout the day.

My family plot proposal mimics this radial organization method and is accentuated by a mango tree in the middle of the space to further draw people out into this gathering space and

have a natural form of shade that can also be a source of nourishment and nourishment. It acts as a space that meets the basic needs of food, water, and shelter in addition to being a space to gather and to socialize. I believe that simply providing a plot with a mango tree in the center would lead to an organic population of the plot as seen in my ideal vision.

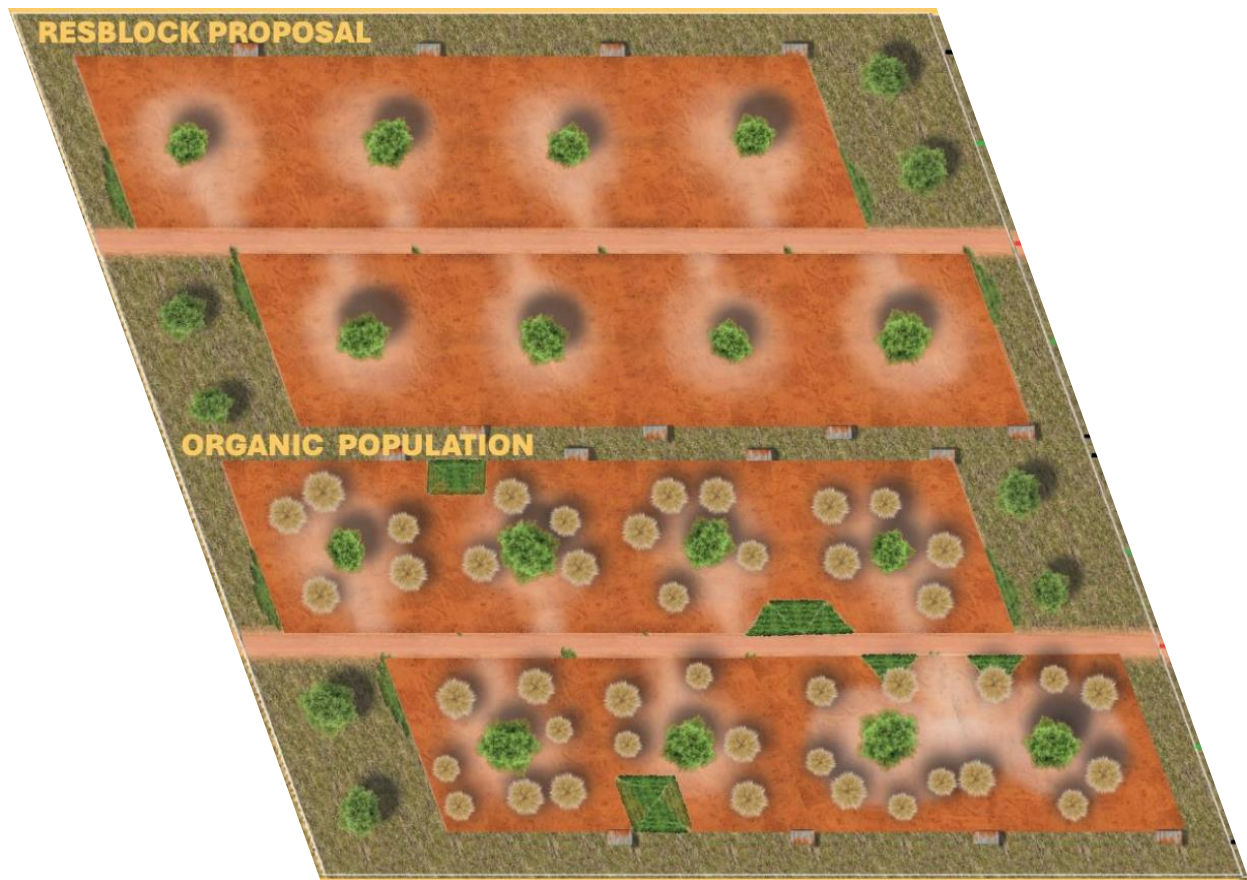


Figure 11. Graphical representation of empty mango tree plot proposal with organic population vision (Meidinger, 2024)



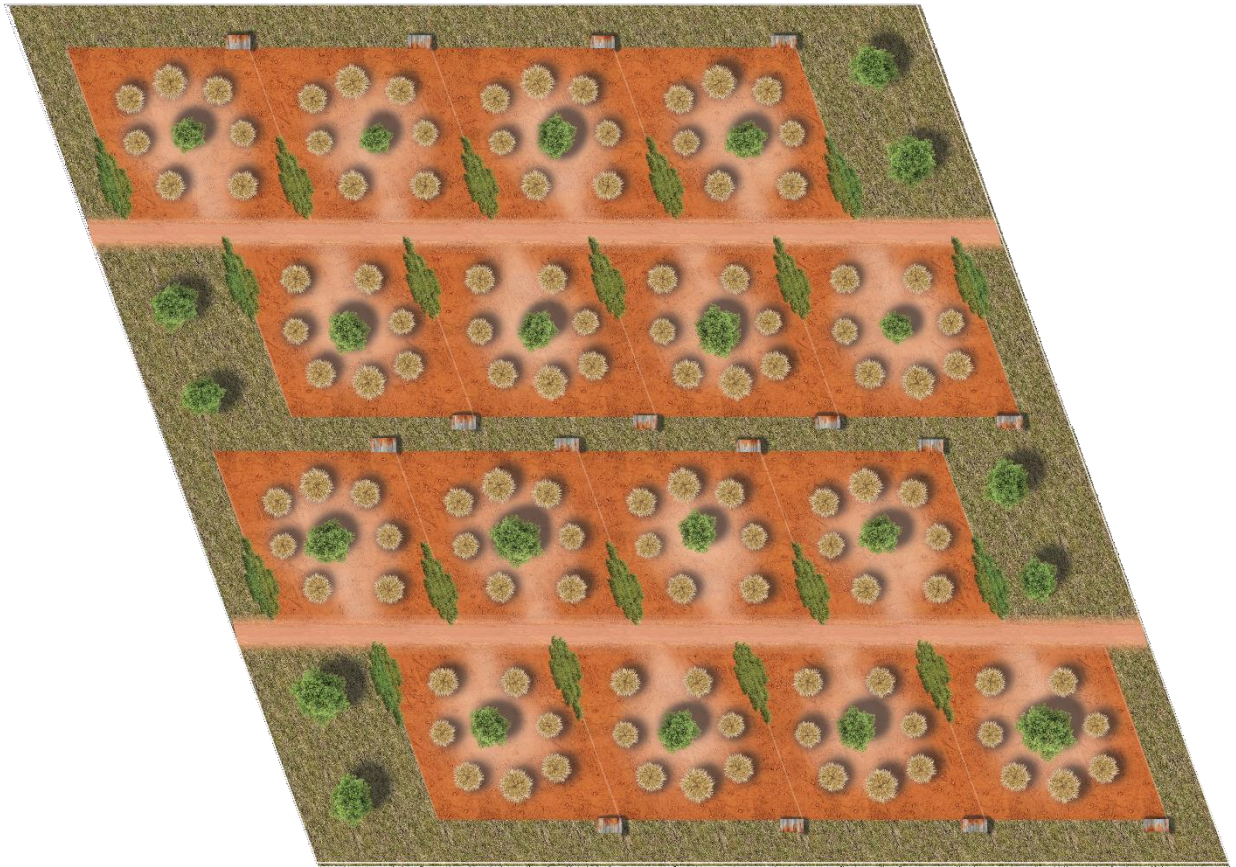


Figure 12. A graphical representation of an ideal vision for a family block proposal in Agojo;

500' x 500' (Meidinger 2024)

In addition to the individual family plot, I have reconsidered the spacing and organization between each family plot. Being that there are many kids living within Agojo, I believe more green space and room to move about is needed. You will often find children on their own, away from adults, playing soccer or hanging out in the shade.



Figure 13. Children playing soccer in Pagirinya Refugee Camp in Uganda (Meidinger, 2018)

I believe allowing refugees to organically populate themselves within the family plot will encourage feelings of ownership and a sense of identity and freedom. I also believe placing a mango tree in the center of each family plot will encourage and bring about my ideal vision organically as observed within the preexisting organizational methods of the people of Agojo. It also takes into account the cultural aspects of community and gathering by providing a space to socialize within your family circle while considering the larger community proximity.



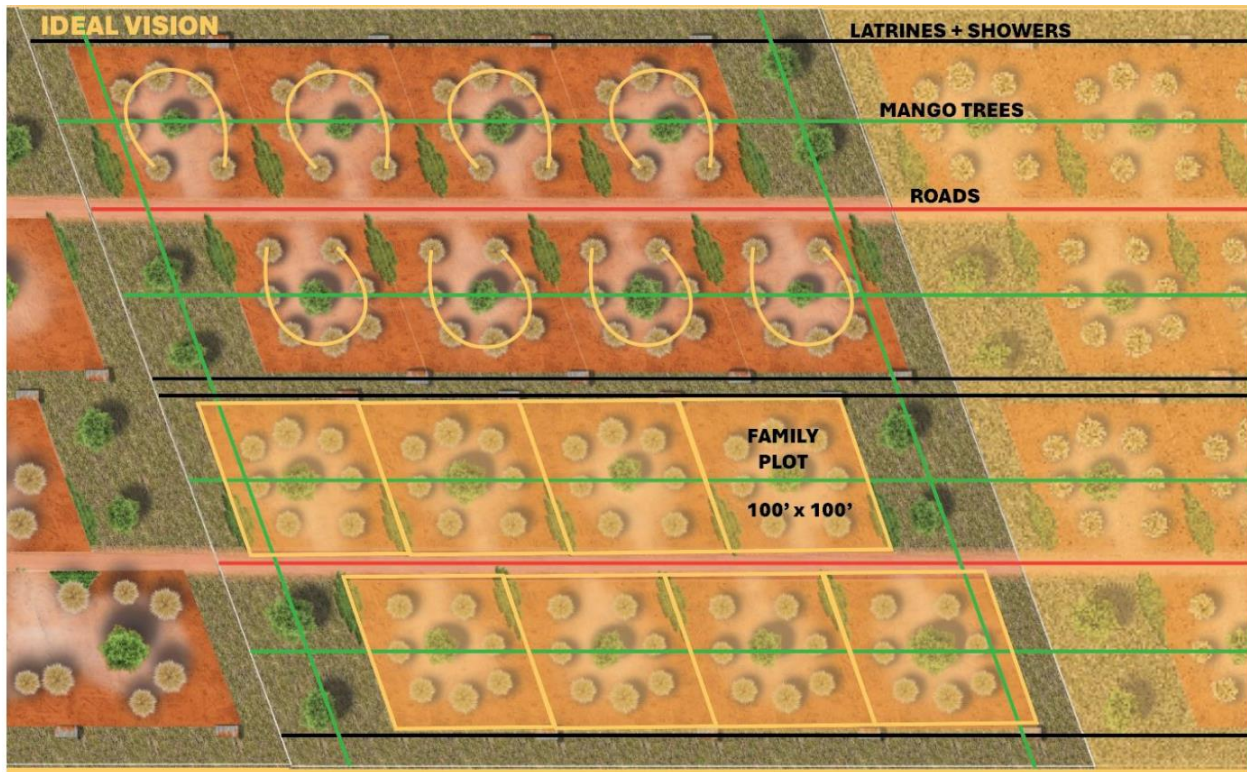


Figure 14. An annotated graphical representation of the organization of elements within the proposed ideal family block in Agojo (Meidinger, 2024)

Looking back to the topographical nature of the site, being that Agojo is built on a ridge, from the main road, when you move east or west, you will be moving downhill. I propose wells and water towers be constructed along the main road, spaced equally between each residential district to provide adequate and equitable water supply. With the nature of gravity and the site topography, a water distribution system may be implemented in the future to provide running water to families simply utilizing gravity. Sewage systems may also be implemented in the future due to the lateral nature of the organization methods used to place latrines.

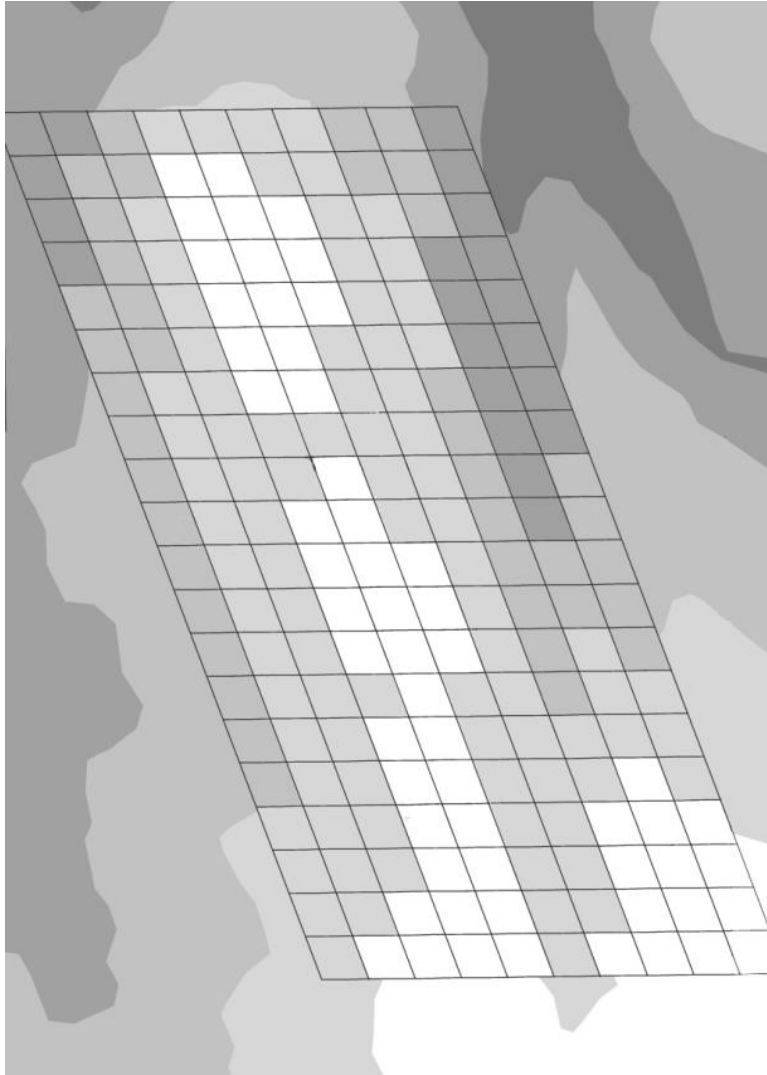


Figure 15. A graphical representation of the topography of Agojo (Meidinger, 2024)

#### **4. THE CONCLUSION**

To further realize this project, the next step would be to create a coordination and implementation guide of a proposed residential block by providing a step-by-step instructional handbook. Part of the reason as to why the pre-existing grid system is used is due to its simplicity and ease of implementation. The proposed residential block could even be utilized

beyond refugee camps and could potentially be used in the urban design of a new city or village. Showing a timeline of the process would be beneficial to the conception of this proposal.

Further development of a bigger picture master plan would also be beneficial such as community spaces, shared social spaces, infrastructural planning, and perhaps water collection systems to help with the growth of the proposed mango trees. Implementation costs for wells, trees, latrines, and roads would be helpful as well to provide an attainable financial goal that could potentially be funded by groups around the world.

A single residential block test prototype could be created and studied to provide further evidence that the proposal could benefit people and empower refugees in a sustainable manner.

Overall, I believe my proposal gives people the freedom and flexibility to organize themselves how they want to, which is a very important factor to consider when dealing with people who may feel as though they have lost control over their lives as refugees. The mango tree is intended to act as a symbol of the culture in that it acts as a space that people can gather and find that sense of cultural identity and belonging. The mango tree also nourishes and provides a means of hydration.

The proposal takes deep consideration of the social customs and cultural traditions of the community and strives to empower by providing order and structure while remaining sensitive to the culture.



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