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INTRODUCTION

The project's main goal is to bring the benefits of the green revolution to the populations most vulnerable to desertification. By providing housing, education, and fertilizer to local people, we can help them stay in their region and take care of their land. The communal housing will encourage the growth of green spaces around the

When farmers are successful in cultivating their crops, they can uplift themselves out of poverty. When farmers thrive, they can eliminate poverty and hunger from their communities Acacia Villages is a mobile center that is emerging in the arid Sahel region. It offers education, training in

agricultural technology, affordable fertilizer, and modern tools. It also creates a local trading zone to maximize profits from crop sales. Agriculture around the center flourishes, and knowledge spreads far and wide. The structure expands as more participants join in.

ISSUE

chosen site.







• Africa is already one of the hottest regions on Earth.

• By the end of the century, Africa's median temperature

could increase by 3-4°C, which is 1.5 times higher than

The temperature increase will impact rainfall, causing

extreme wet seasons in West and East Africa and drying

FERTIL SOIL DEGRADATION AND

Around 45% of Africa's land is impacted by desertifi-

cation, with 55% at high or very high risk of further deg-

• The Sahel region is especially affected, with around

Land degradation and desertification also harm biodi-

135 million people living in poverty and

depending on degraded lands.

CLIMATE

the global average.

Avarage temperature now

DESERTIFICATION

25 to 30 °C

radation.

in Southern Africa and the Sahara.



• Africa has limited water resources.

water limits by 2025.

Groundwater storage (water depth in mm)

> 50 000

25 000 - 50 000

10 000 - 25 000

WIND MAP

1000 - 10 000

< 1000

350-600 million people

Some African countries are projected to exceed their

Climate change may cause increased water stress for

Estimated depth to groundwater (mbgl)

25 - 50

50 - 100

Increasing desertification in this region which is essen-

Over the last 100 years the Sahara desert has grown

has grown by 10% and will continue to expand. It will af-

fect a ton of people without any produstive land to grow

Northasterly Trades

tially pulling the Sahara desert south.

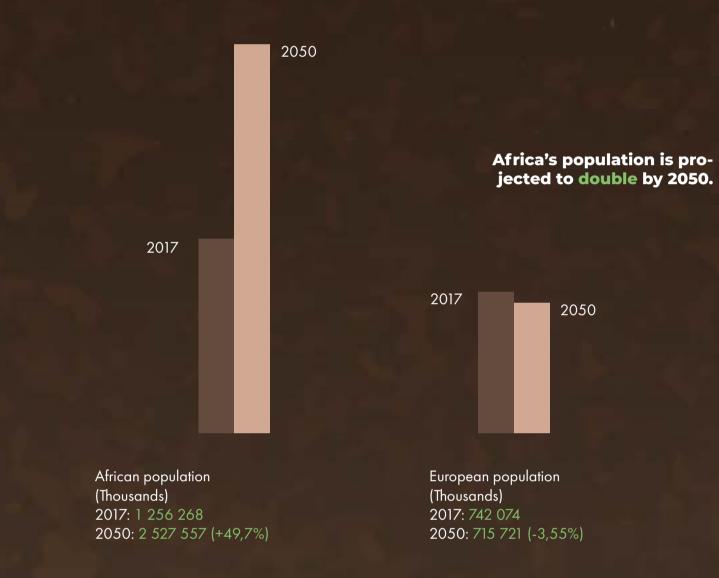
Climate-Smart Agriculture:
water conservation
agroecology
the use of climate-resilient crop varieties.

100 - 250



POPULATION

 Africa's population to double in 40 years, youth population to grow from 205M to 330-450M • Growth could lead to higher productivity or social tensions, violence, and conflict UN'slow-fertilityvariantshowsworking-agepopulation to increase by 630M, leading to a 25% increase in per capita incomes Job creation uncertain, requires 12-15M new jobs annually to absorb the increase in working-age population.



INFRASTRUCTURE

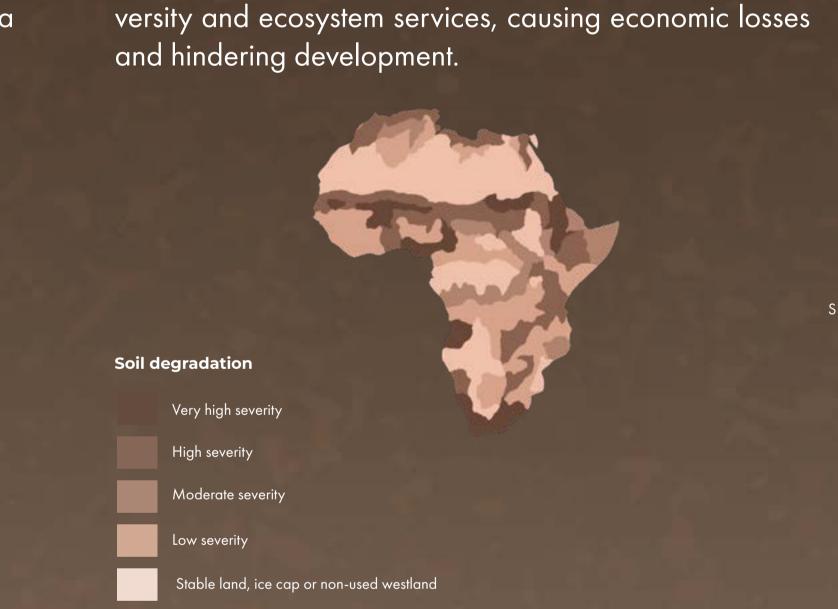
 Weak physical infrastructure is hindering Africa's integration into the global trading system. Higher trade costs are incurred, especially for landlocked countries. Most roads are unpaved, and those built in the 1970s and 80s are in poor condition due to a lack of maintenance. Africa's rail transport system is poorly interconnected and has about 83,987 km of railway lines over an area



Estimated depth to groundwater (mbgl) Green Wall Pass



Soil degradation Very high severity High severity

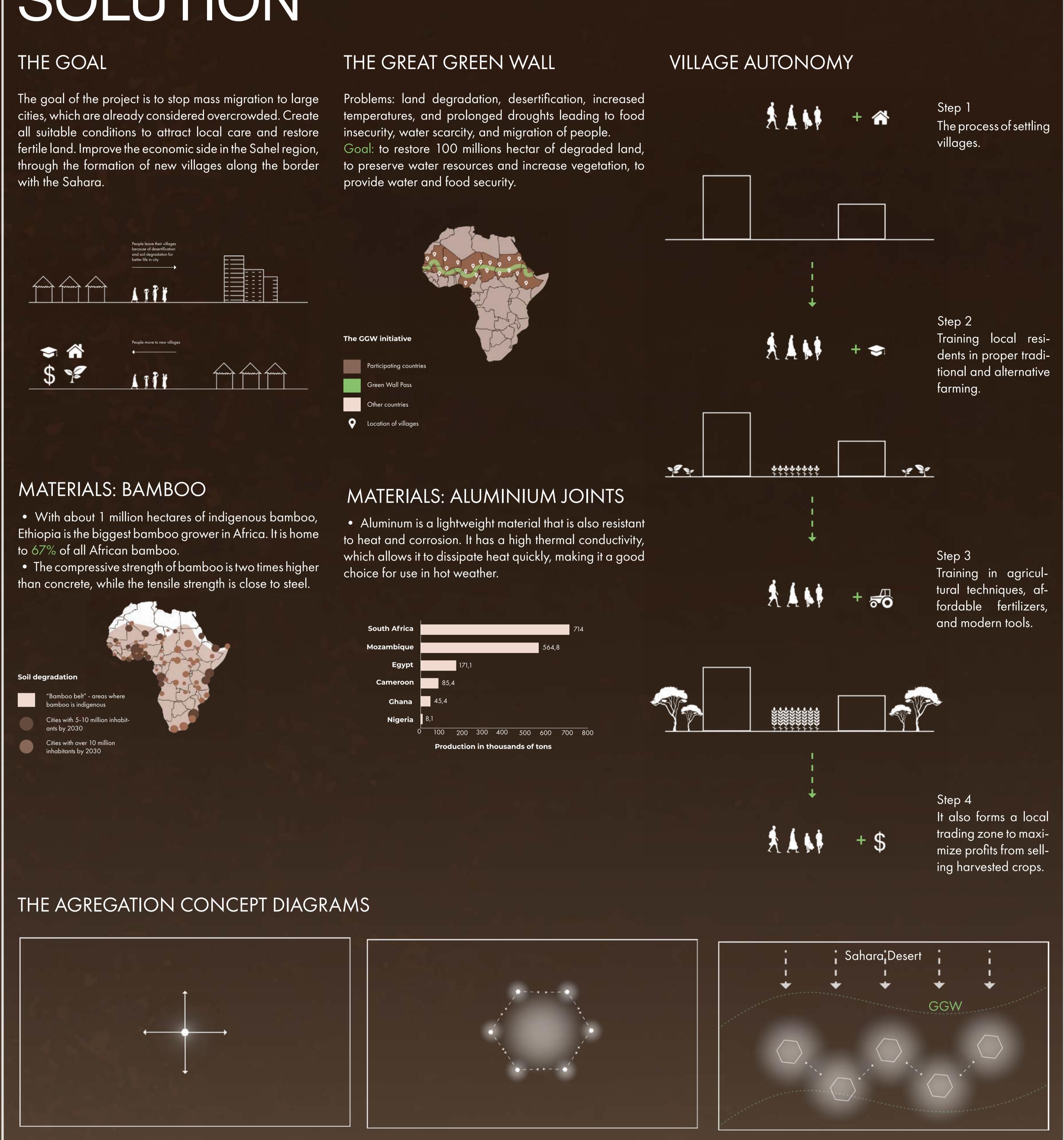






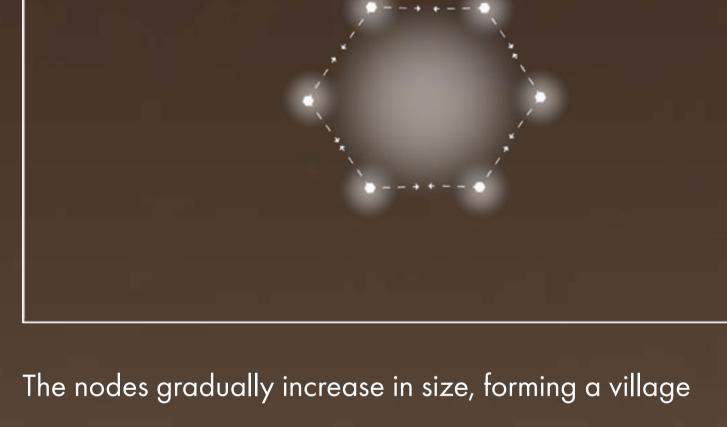
Soil Erosion:Land Use and Agricultural Practices:• deforestation• excessive tilling• improper land management
practices• overgrazing• intense rainfall• inadequate crop rotation.
 emperatures
 Water Management:

seasons
 Soil degradation

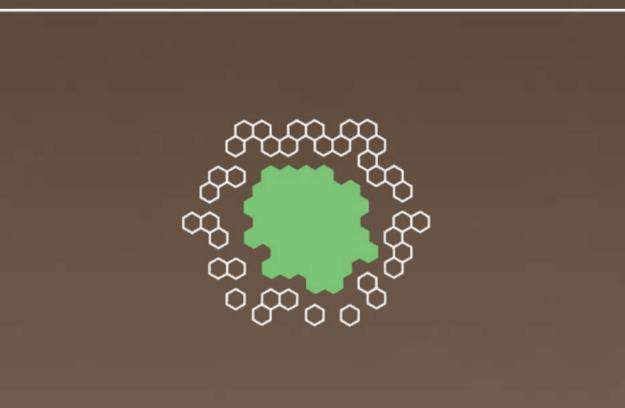


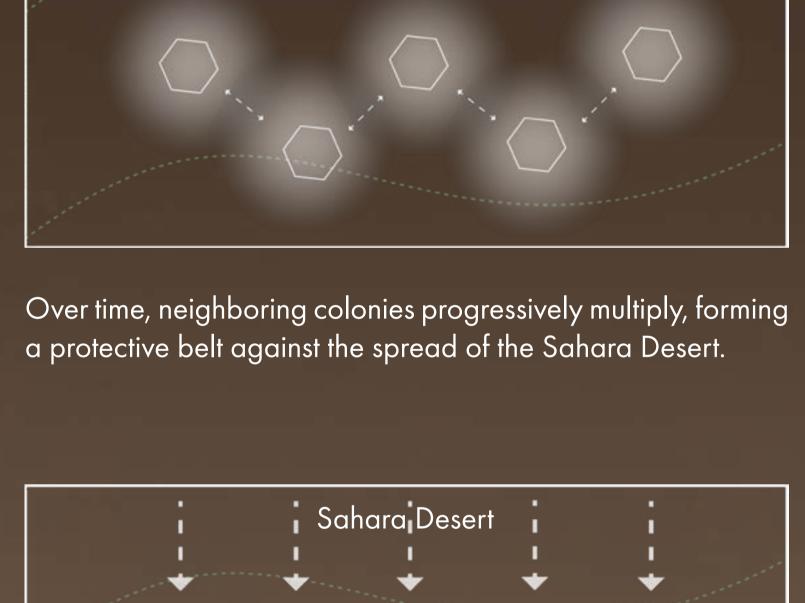
Nodes in the desert

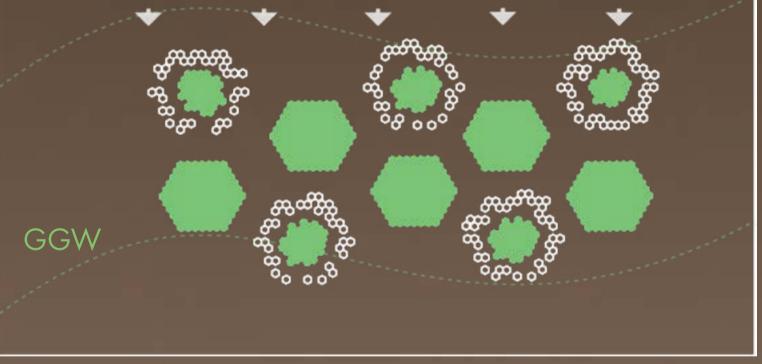
The green space provided by GW can be used as a seed for The inner courtyard forms a space for farming, which is protect- Agriculture within the village thrives and knowledge spreads building growth and provide a basic living environment. ed from wind and desert.



INTERNAL AND EXTERNAL ECONOMY CONCEPT DIAGRAM







across the horizon. The structure grows with more participants, and when the local community becomes self-sufficient, it moves

to other places.



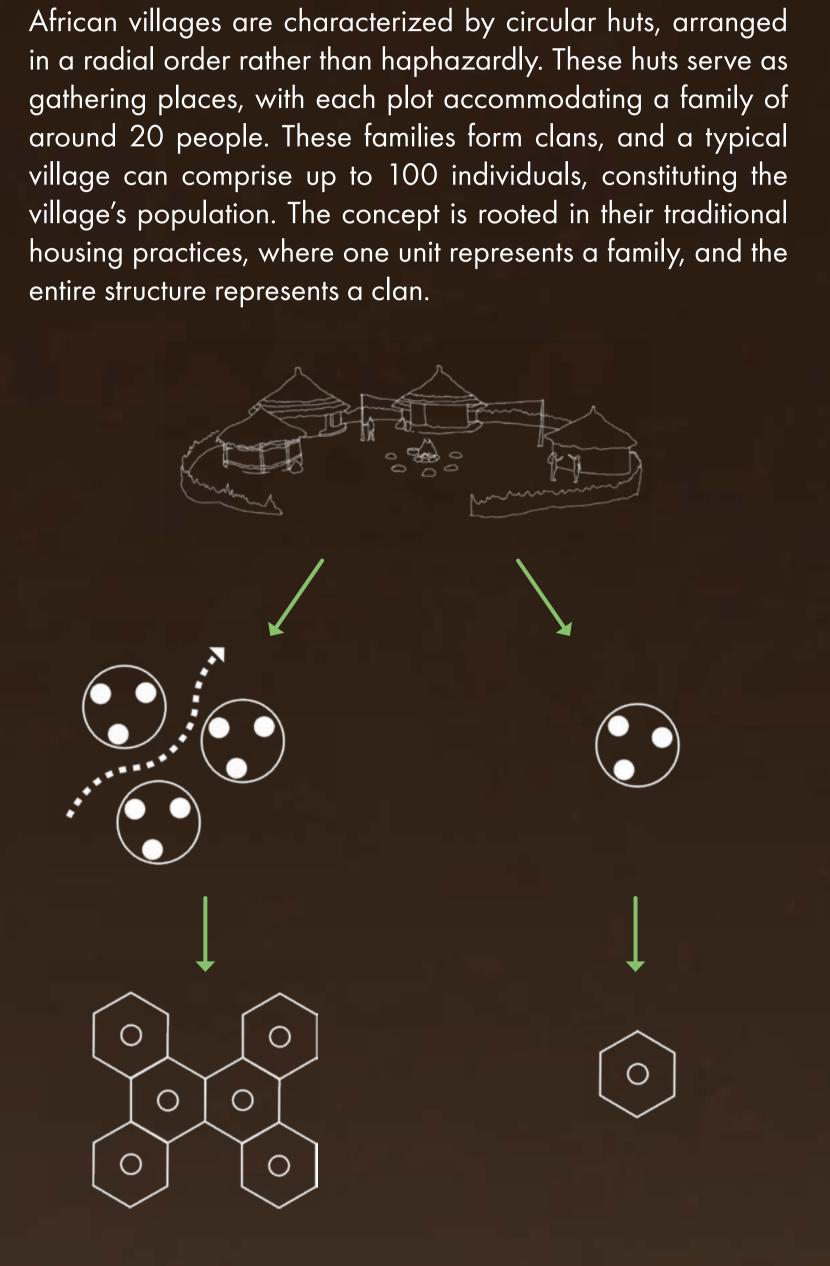
TEACHING PROPER FARMING PRACTICES FARMING Jacob Land Land Street

CONCEPT

CONCEPT EXPLANATION Inspired by one of Africa's symbolic treasures, the acacia tree, our project seamlessly mirrors its innate functionality and captivating modus operandi. Thriving in clusters, these majestic giants intertwine their branches to form a sprawling canopy, a

Beneath this benevolent shade, water is conserved, breathes life into parched lands, and fosters a vibrant ecosystem, embodying the resilience and interconnectedness celebrated in African cultures. The acacia tree stands as an enduring symbol of unity and togetherness, a testament to the profound strength found in collective harmony

SHAPE CONCEPT



WIND DIAGRAMS OF MODULE Africans construct round, streamlined dwellings to withstand strong winds and prevent them from being blown away. The hexagonal shape emerged as a modular adaptation, facilitating construction and transportation to various sites.

Circular space Reviewed plan shape Square space

EXAMPLE INFRUSTRUCTURE FOR FOR A POLULATION OF The village will be equipped with basic infrastructure such as first aid, a marketplace, schools for basic science and agriculture, vertical farms, livestock facilities, and public spaces.

