



CO-CREATE YANGON

Strategic planning for
community-led housing

FINAL REPORT - DECEMBER 2019

Background and structure of the report

This report summarises the activities and output of the workshop “Co-creation: Strategic Planning for Community-Led Housing” hosted by Women for the World (WfW) with the assistance of the Community Architects Network (CAN) during November 2019. It offers a conceptualisation of co-creation in the field of community development for the context of Yangon, and provides an overview of existing practices and initiatives that WfW and urban poor communities have been involved with in the course of the last decade. Building on this body of knowledge and bringing together the experiences of several international urban development practitioners, local young professionals and students, and low-income communities, this report documents strategies and guidelines for the implementation of people-centred development. These guidelines are structured in three distinct scales, the household scale, the community scale and the township/city scale.

We would like to thank everyone that joined and participated in this workshop; the South Dagon authorities for hosting us and being enthusiastic about becoming a role-model for co-creation; all the Members of Parliament, the community leaders from the Women’s Saving and Development Network, the communities from South Dagon that trusted and shared their stories with us; all the friends of the CAN network who injected so much energy, knowledge and inspiration into this workshop; all the young professionals and architecture students; to everyone who participated in this effort, sincerely thank you!



CAN | COMMUNITY ARCHITECTS NETWORK



Women for the world

ပျိုမေအိမ်လူမှုဖွံ့ဖြိုးတိုးတက်ရေးအသင်း (အင်းစိန်)



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လူမှုဘဝများဖွံ့ဖြိုးတိုးတက်အောင်ပြုစုပျိုးထောင်ကြပါစို့။ 

*“People are the cells of the township;
Only in a stable environment can the cells grow healthily;
Only healthy cells can create strong communities;
Strong communities are the strength of the township;
Let us develop the life of the cells, the life of the people.”*

Framing co-creation: An introduction

“This is not a workshop; this is a real friendship, brotherhood, sisterhood, motherhood.”
Witee Wisuthumporn, CAN coordinator

In 2009, with only a few women, little time, scarce resources and against all difficulties and obstacles, a model for housing development started emerging based on the power of people. Since then, the civil society organisation Women for the World (WfW) has been mobilising and supporting low-income communities in the peripheries of Yangon to achieve the dream of owning their own house. Building on partnerships and friendships that go back to the beginnings of WfW’s operation, this workshop was an opportunity to celebrate what has been achieved since then.

Today, a huge milestone is reached with the collaboration of WfW with Union, regional and local authorities for the development of affordable housing. The initiation of this partnership marks a critical moment of change, building bridges of collaboration, and increasing the scope and impact of people-centred practices. This newly born system of support for the urban poor is historic for the context of Myanmar, and possibly an innovative model across the region of South East Asia. With the aim of capturing different knowledges and approaches, and adapting and injecting them in the ongoing process of community-led housing, this workshop was called at this moment of change.

One core principle of co-creation is that all knowledges are valued. This becomes even more crucial when we think that urban and housing development are commonly done in a top-down way, without consulting the people, and in some cases without adequate awareness about their conditions on the ground. What the planning side sees and knows is often different from what people experience, but when we work together, the positive impact on the city can be much bigger. Our strong belief is that everyone’s vision for the city is critical, and for that, there is a need for more inclusive processes. As such, the main objective of this workshop was to think of options and possibilities for housing, with an understanding for the urban poor. It is important to note that this does not refer only to *housing* as a material asset, but also on ways to *connect to the city*, and to become an *equally recognised part of the city*.

The co-creation workshop brought together many stakeholders that rarely sit together: communities from South Dagon township, leaders and members of existing community-led housing projects, authorities from South Dagon and beyond, architecture students and young professionals, members of the Community Architects Network (CAN) from India, Bangladesh, Thailand, Indonesia and the Philippines, researchers and urban practitioners. This was an incredible opportunity to bring together different knowledges, different experiences and perspectives, and share, listen, learn and produce ideas. The key message to take away is that **it is not only possible, but also necessary to work with the people.**

COMMUNITY-LED PRACTICES IN YANGON - THE STORY SO FAR

မြေကွက် - 15' x 35'
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 ✓ နေရာ: ကမ္ဘာ့အဆင့်မြင့် MATERIALS ပေးပို့ပေးချင်
 ✓ အဆင့်မြှင့်တင်မှု
 ✓ ပြောင်းလဲမှု



Experiences of community-led housing in Yangon

Women for the World (WfW) or Pyo Mae Eain is a national non-governmental organization operating in Myanmar since 2004. WfW has been working to address the **gaps in land ownership and housing** in Yangon and other parts of the country, utilizing a network of partners from the state and local authorities, from the civil society and academia, and directly from the communities they operate in.

Having started with a focus on female and youth empowerment, WfW shifted their scope towards post-disaster reconstruction and rehabilitation after the occurrence of Cyclone Nargis in 2008. The aftermath of the disaster made it imperative to work with people-centred methods and in a collaborative fashion, in order to utilize the capabilities of the affected and increase the efficiency of the recovery. This is when WfW adopted the internationally well-established procedure of **collective women savings groups (WSG)**. These groups become the starting point for collective actions to spread throughout several communities in Yangon.

Currently, WfW work in the areas of women's human rights empowerment, livelihood, income generation, food security, land and housing development, and community infrastructure, with their core values being around the respect of ethnic diversity, the promotion of multicultural and multi-religious communities, and the promotion of social cohesion. WfW have been increasingly working to **support low-income and/or informal dwellers to access secure housing**, improve literacy and numeracy skills, as well as technical skills which could lead to small businesses and income-generation.



Women's Savings Groups

Generally, women's saving groups are formed by people who live in the same community (the same street, ward, village, etc) with an intention to **solve common issues and promote community development** in the form of secure housing, water provision, transportation, health and education services, among others. Mostly, the members of such saving groups are from poor, marginalized and vulnerable communities. Collective saving becomes for them an effective tool to increase their capacities, like leadership skills, financial literacy and management, trust-building, team-building, decision-making, transparency, accountability, problem-solving, self-reliance and confidence.

The experiences and practices of saving members show that these women have the power to be **leaders, key implementers, advocates, decision-makers, community builders and social mobilizers** through the saving activity. Saving procedures are conceived in a way that allows for the progressive building of human, financial and technical resources, and the active participation of all members in the group's agenda -like attending the weekly and monthly meetings and collective activities- is essential to reach the optimum results. Furthermore, commitment to save regularly and to comply with the rules and regulations relating to membership, savings, loans, interest-rates and funds is expected by every member.

Next to the numerous intangible benefits, saving group members also get **access to safe loans with lower interest rates**, without putting up any substantial collateral. Loan repayment is comparatively easier, and occurs in instalments that are collectively decided upon depending on the loan amount, the member's income and capability to repay. Saving members have argued that this significantly improves their income vs expenditure balance, considering that before joining a saving group, up to 20% of their daily income would go into loan repayment. Compared to that, at present they are able to contribute 17% of their daily income into savings. The result of building financial



capacity systematically manifests into an increasing power within the group to solve their social problems like housing, land, water, social welfare, and agriculture through collaboration of all members. As such, WfW advocates for the integration of collective savings in community development in order to reach sustainable outputs through people-powered processes.

To sum up, these are the main reasons for joining savings groups:

- **To increase accessibility to basic needs, especially affordable housing for urban poor households;**
- **To upgrade the living conditions of urban and rural poor households;**
- **To promote sustainable urban development that is inclusive of the poor people.**

Community-led housing projects

The process of community-led housing starts with the **formation of savings groups** consisting of up to 30 people, and the inauguration of a period of saving that usually ranges between one and two years. There exist certain assessment and selection criteria to identify members for the housing projects. These are developed by WfW and the saving members themselves, based on someone's current housing needs, amount of saving, punctuality in saving, recommendation by other members, active involvement in activities, and acceptance of the collective procedures. Selected members must be introduced to the **established ground rules** regarding the housing loan and accept them fully. According to these ground rules, all members must be accountable not only for loan repayment, but also for collectively implementing the housing scheme.

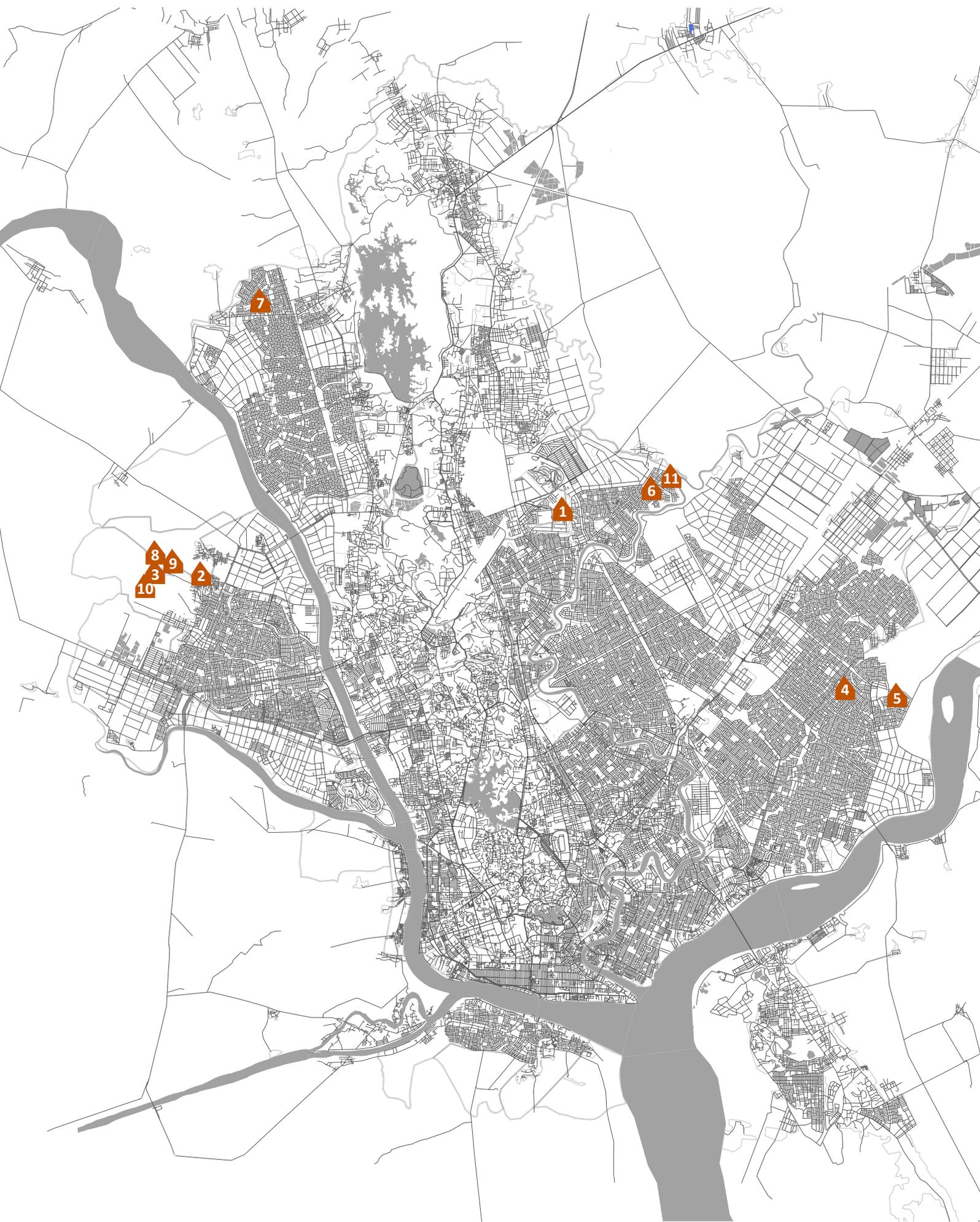
As the search for land can last for months, the savings groups members start in parallel to the saving to scout for plots that suit their needs –with affordability being the most important criterion. In the very first project of WfW, initiated in 2009 in Hlaingtharyar township, women had been initially looking for private or government-owned land to purchase, however their search was proving unsuccessful and they bought an agricultural plot instead. Since then, all of WfW housing projects have been implemented on **agricultural land** as well. These land plots can be mostly encountered in peri-urban areas; usually former paddy fields with no infrastructure present. The **land is then owned collectively** by the participating savings groups members, as is stated in the ownership certificate that includes all their names. People were initially skeptical towards the collective nature of the project, but that was only until a sense of community emerged and trust was built among the WSG members.

Once land has been purchased, the women form a housing implementation committee assuming accountability for the project. The housing project must start within two weeks of receiving the housing loan. With the assistance of WfW,

they divide the land in individual plots, negotiate their priorities and needs, design their housing units and commence with the construction of their settlement –including basic infrastructure and the houses themselves. This model has been replicated successfully since, and WfW count 11 housing projects in Yangon to date.

SAN THIT SA HOUSING, HLAINGTHARYAR





1. PAN THAZIN HOUSING, NORTH OAKKALAR

Land Size: 200' x 100'
Plot Size: 14' x 30'
Number of Households: 30
Population: 61 (M) 54 (F)
House Size: 10' x 24.5'
Cost per House*: 1,300,000 MMK
Total Budget: 40,000,000 MMK
Established in: 2009



2. PYIT TINE TAUNG HOUSING, HLAINGTHARYAR

Land Size: 220' x 210'
Plot Size: 15' x 36'
Number of Households: 64
Population: 291
House Size: 10' x 21'
Cost per House*: 1,500,000 MMK
Total Budget: 97,500,000 MMK
Established in: 2009



3. SEE SEIN SHIN HOUSING, HLAINGTHARYAR

Land Size: 1,725 acres
Plot Size: 13' x 36'
Number of Households: 140
Population: 673
House Size: 10' x 28'
Cost per House*: 1,770,000 MMK
Total Budget: 248,000,000 MMK
Established in: March 2017



4. BAWA PAN TINE HOUSING, DAGON SEIKKAN

Land Size: 0,935 acres
Plot Size: 13' x 30'
Number of Households: 83
Population: 147 (M) 145 (F)
House Size: 10' x 15'
Cost per House*: 1,250,000 MMK
Total Budget: 103,750,000 MMK
Established in: April 2017



5. MOE SAN PAN HOUSING, DAGON SEIKKAN

Land Size: 0,629 acres
Plot Size: 13' x 30'
Number of Households: 59
Population: 99 (M) 103 (F)
House Size: 10' x 15'
Cost per House*: 1,250,000 MMK
Total Budget: 73,750,000 MMK
Established in: April 2017



6. TAW WIN HOUSING, SHWE PAUK KAN

Land Size: 300' x 300'
Plot Size: 15' x 30'
Number of Households: 120
Population: 629
House Size: 10' x 21'
Cost per House*: 2,200,000 MMK
Total Budget: 264,000,000 MMK
Established in: July 2017



7. KHIT THIT MAY HOUSING, SHWE PYI THAR

Land Size: 100' X 680'
Plot Size: 14' x 36'
Number of Households: 88
Population: 410
House Size: 12' x 24'
Cost per House*: 2,276,655 MMK
Total Budget: 200,345,616 MMK
Established in: August 2017



8. SAN THIT SA HOUSING, HLAINGTHARYAR

Land Size: 2,026 acres
Plot Size: 15' x 30'
Number of Households: 96
Population: 480
House Size: 10' x 18'
Cost per House*: 3,000,000 MMK
Total Budget: 2,880,000 MMK
Established in: January 2018



9. HNIN SAN PAN HOUSING (I), HLAINGTHARYAR

Land Size: 1,526 acres
Plot Size: 14' x 35'
Number of Households: 69
Population: 276
House Size: 10' x 25'
Cost per House*: 3,000,000 MMK
Total Budget: 207,000,000 MMK
Established in: April 2018



10. HNIN SAN PAN HOUSING (II), HLAINGTHARYAR

Land Size: 0,628 acres
Plot Size: 14' x 35'
Number of Households: 29
Population: 145
House Size: 10' x 25'
Cost per House*: 3,000,000 MMK
Total Budget: 87,000,000 MMK
Established in: April 2018



11. LA MIN EAIN HOUSING, SHWE PAUK KAN

Land Size: 1,04 acres
Plot Size: 14' x 38', 13' x 42'
Number of Households: 58
Population: 290
House Size: 10' x 26'
Cost per House*: 3,000,000 MMK
Total Budget: 174,000,000 MMK
Established in: December 2018



836 households



3,803 residents

Why community-led data collection?

The first step to improving the conditions of the urban poor and the homeless is in many cases the collection of data about their communities. The **enumeration of informal settlements** is a powerful tool widely acknowledged for its role in mobilising and strengthening communities, as well as increasing their recognition by authorities and their leverage capacity.

Specifically in Yangon, data management capacity is relatively low, at times regardless of the legal status (formal vs. informal). The information about informal settlements in the city is characterised by gaps and discrepancies, and even when data are available, they fail to capture the conditions that residents experience on the ground.

These gaps can be best filled through a **people-centred data collection**. Not only will be the information **grounded** to the realities of the surveyed people, but the efficiency of the process will increase significantly as people know best their communities and can navigate the process much easier than outsiders. Next to that, a community-led survey can be viewed as a tool to **showcase the power** of low-income dwellers, their level of organisation, their valuable knowledges. Furthermore, it creates an opportunity for communities and civil society to **collaborate** with authorities and improve their relationships.

WfW have been long engaged in the collection of data of and with informal dwellers. Their role therein is that of the facilitator, mediator between communities and authorities, or



among communities themselves. In 2015 WfW conducted a city-wide survey project for the Department of Housing and Urban Development (DUHD), during which 83 sites were mapped in 12 townships.

Currently, the organisation is involved in the collection of data for two distinct projects. One is a survey of 100 informal settlements in the townships South Dagon and Hlaingtharyar, the objective of which is to obtain detailed data on the location, boundaries of the settlements, demographic characteristics, access to urban services, main challenges identified by residents, security of tenure status, history of the community among other. The other project involves a community-led urban safety audit in two wards within Hlaingtharyar. Its objective is to both strengthen the bond and increase the trust among people, as well as between people and authorities, raise awareness that will lead into action, and contribute to the work of local authorities.

Assuming this people-centred process, the data on informal settlements are co-produced, utilizing the situated knowledge and experiences of dwellers, and nurturing a good relationship with local governments. An important principle in this process is that the data is shared with the communities in the first place, as a tool to initiate activities, and also with authorities and the wider public in order to increase awareness and argue for the value of urban poor residents.

Overall, the trajectory of community-led data collection illustrates that:

- **Data is urgently needed;**
- **Community-led survey is an efficient way to understand the reality;**
- **Data collection can be a catalyst for co-creation and for scaling up people-centred development.**





KB Kookmin Bank

KB Labor Union

Women for the world

Women Community Center

Taw Win Housing Shwepaukkan

ဘုရားနတ်
(ECCO)
အသက် ၁၅ နှစ်မှ စတင်
အသုံးပြုနိုင်ပါသည်။

Witnessing and celebrating community power

When discussing about community-led housing and its possibilities to scale up, it is important to go back to what has been done, study it and learn from it. As such, the workshop participants visited three communities and their housing projects: Pan Thazin, Taw Win and La Min Eain. These three communities have different backgrounds, they underwent different trajectories and are today in **different stages of their development**.

But what they have in common is that they showcase **how much can be achieved** by strong and well-connected communities. They demonstrate that a people-led process can be both efficient and inclusive; that affordable housing that respects people's choices and lifestyles is possible; that from very scarce resources, low-income households can achieve many things, including planning and building their houses and infrastructures.

We witnessed communities that support each other, that create their own ecosystems and incrementally improve their conditions, both on an individual and on a collective level. We witnessed people that are **adapting to change**, people that **bring change**, people that have creativity and perseverance. In a way, none of the housing projects is complete, because people keep transforming their settlements, little by little, depending on their capacities and aspirations.

In Pan Thazin, one of the oldest housing projects, most of the original housing units have been replaced with more solid and permanent



constructions. In place of bamboo and timber comes concrete and plaster walls. Many households have upgraded vertically, adding an extra floor to accommodate new family members and have a more comfortable life. Inside the modest housing units, people have established small businesses, from tailoring and handicrafts, to making guitars and repairing bicycles. These home-based income generating activities allow families to maintain their livelihoods and also become a **connecting point between the residents and the city**, as people from outside also use their services.



All these changes are done by the same people that used to live in squatter settlements, and to be over-burdened by loans and the poor conditions of their surroundings. Through collective organisation, the continuing saving activity and incremental investments in their houses, businesses, infrastructures, in their healthcare and the education of their children, these people now live much better, and more dignified lives.



CASE STUDY SOUTH DAGON: CO-CREATION AT TOWNSHIP LEVEL





South Dagon Township

Township profile: South Dagon

South Dagon is located in the south-east part of Yangon, bordering the townships North Dagon and East Dagon in the north, Thingangyun in the west across the Pazundaung creek, and Dagon Seikkan to the south-east. In administrative terms, South Dagon is divided into 44 wards. It is one of the townships that emerged in the early 1990s, in the course of the city's expansion to accommodate dwellers from inner-city areas, and promote industrial development. For many of these dwellers the living conditions deteriorated from that resettlement.

South Dagon is a vibrant township, with 33 schools, 2 colleges, one principal hospital and two smaller ones, two train stations, five industries and over 100 monasteries. For the supply of services, South Dagon has 4 electricity supply stations and uses water from the river that gets purified and distributed throughout the township. The significant presence of industry has been attracting low-income populations, who can find relatively stable employment there. Generally, the township does not face a high risk of disasters, except wards 22 and 23 that are in close proximity to the river.

Today, South Dagon has a population of 371,646 people according to the last census, and an average density of 4,697.7 persons per km² -considerably less compared to the average density of Yangon. The mean household size is at 4,7 persons. Over half of the township's population own their own house; around 37% are renters, and 1,6% live in government quarters. According to a survey by WfW, there are **7,154 informal households** in South Dagon;



Fact-sheet South Dagon (based on 2014 Census)

Total population	371,646		
Males	181,140		
Females	190,506		
Sex ratio	95 males per 100 females		
Percentage of urban population	100.0 %		
Area	79.1 km ²		
Population density	4,697.7 persons per km ²		
Number of wards	44		
Number of village tracts	-		
Mean household size	4.7 persons		
Number of private households	76,984		
Percentage of female headed households	22.9%		
Percentage of population by age group			
Children (0 – 14 years)	24.9%		
Economically productive (15 – 64 years)	70.3% ^a		
Elderly population (65+ years)	4.8%		
Literacy rate (persons aged 15 and over)	95.6%		
People with any form of disability	13,875 (3.7% of total population)		
Ownership of housing unit (Tenure)			
Owner	40,931 (53.2%)		
Renter	28,549 (37.1%)		
Provided free (individually)	3,038 (3.9%)		
Government quarters	1,264 (1.6%)		
Private company quarters	837 (1.1%)		
Other	2,365 (3.1%)		
Material for housing	Wall	Floor	Roof
Dhani/Theke/In leaf	3.9%	n.a.	8.1%
Bamboo	40.2%	10.4%	0.2%
Earth	0.1%	0.5%	n.a.
Wood	32.4%	68.7%	0.2%
Corrugated sheet	2.7%	n.a.	90.5%
Tile/Brick/Concrete	18.5%	19.0%	0.7%
Other	2.2%	1.3%	0.2%

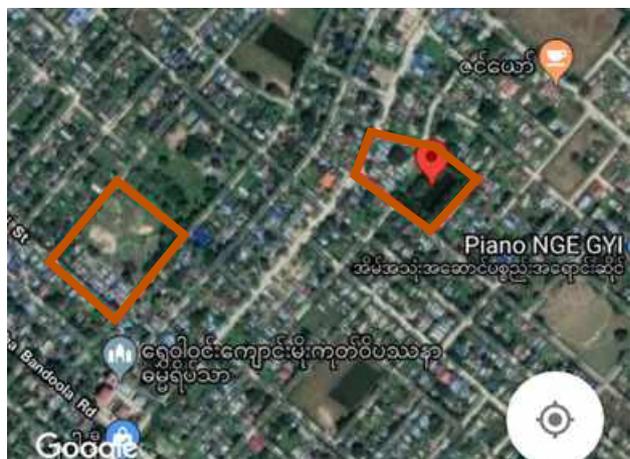
a number that is very close to the authorities estimation about squatters. These are mostly factory workers or daily labourers, with average monthly incomes of 1.6 to 2.2 lakh Ks. With this in mind, the pressure is evident to support these low-income communities and work collaboratively towards a more inclusive and sustainable township.

South Dagon is one of the townships where **community-led housing is planned** to be implemented, with the support of WfW for the mobilisation of communities, and the assistance of township and regional authorities in the identification of suitable land plots and the implementation of basic infrastructure works. Within this context, four sites have been indicated for housing development: two plots for new development and the resettlement of people from nearby areas, and further two sites for on-site upgrading.

The plots for resettlement are located at the border areas between the inhabited and the vacant parts of South Dagon, as the images to the right illustrate. Visiting and observing the sites and their surroundings was helpful to reaffirm the complexity of resettlement on new lands. Studying the surrounding environment, the availability of services, like education and healthcare facilities, employment opportunities and markets; the quality of the soil; the environmental conditions; the vulnerability to disasters and many more are imperative **when choosing a land plot for housing development**.

The sites for on-site upgrading on the other hand require different considerations and approaches. Integrated already in the city's systems on many levels, here, the aim is to work best with **what resources are available** (for example, with a given plot of land, where negotiations for extension are hard or impossible).

The next section shares some insights from one of the on-site upgrading projects that was approached as a case study for this workshop, and the base to form guidelines and strategies for community-led development across scales.





Exploring the potential for on-site upgrading

One of the most recent trajectories that WfW have been pursuing is **on-site upgrading for low-income communities**. The Yangon Region Government indicated two sites in South Dagon where the conditions would be favourable to do that. The settlement emerged in 2009, after factory workers were moved from North Okkalapa, as the broom factory that employed them closed down. The city provided this small plot of land in South Dagon, divided into 103 individual parcels. Each household received a parcel of **10'x20'** on which they self-constructed their houses.

Despite being the owners of the land, the dwellers live in conditions that are comparable to those of informal settlements; living in very **small and poorly constructed units**, and facing a widespread **absence of urban services**. There is no municipal water supply, the houses do not have individual toilets but shared toilet units on one side of the plot, the roads are too narrow for the municipal waste collection vehicle to access, and as such people mostly dispose their waste on the adjacent vacant plot. Formal access to electricity is provided, however the residents report that not all houses are connected to the network, and the availability of electricity is overall not consistent. The material conditions of the houses vary slightly, but are overall very poor, and the land they reside on is usually flooded -to the point where at times it is impossible to leave the house and go to work.

Based on that context, and on the availability and willingness of the community to upgrade their settlement, one workshop day was dedicated to preparing the ground for an inclusionary design



process. This was targeted at three fronts: **mapping** the settlement and housing typologies together with members of the community, documenting the community's **history and aspirations** for the future, and introducing the dwellers to the concept of **savings groups**.

During the mapping exercise, dwellers arranged the current layout of their settlement, indicated the location of vacant houses and open spaces, rated the conditions of their houses, and documented the number of dwellers in each house and how many of these are employed. In parallel to that, interviews with the owners of some houses revealed different trajectories of individual upgrading, but also the financial challenges that people face that make them unwilling to invest in upgrading so far. Complementary to the stories, the housing typologies were documented with sketches and drawings.

Another group focused on story-telling and documenting the history of the settlement. Starting from the community's past, the objective was to understand the present conditions, as well as find out what people aspire their settlement to be. For the majority, a bigger land plot, individual toilets and the availability of some common spaces, like a community centre, are the highest priorities.

Finally, perhaps the most crucial part of the day was the sharing session about the savings groups. Women from the Savings and Development Network talked to the community, explaining how they started the saving activity, what challenges they overcame and what benefits they enjoy by now. The host community never had a savings group, and they treat the concept of collective saving and getting a loan with suspicion. This does not come as a surprise as people have often suffered a lot of burden from loan sharks and unbearable interest rates for very small amounts of money. However, hearing about the real experiences of women that have achieved the dream of a better house has been eye-opening and stimulated the interest of the people. Based on this case study, the workshop participants developed guidelines and strategies for people-centred community development.





The value of the urban poor for the city

The low-income residents of South Dagon are very active in a number of areas of employment. Their occupations present differences both in the stability as well as in the levels of income. Some jobs for example are more impacted by seasonal conditions, especially during the rainy season, while others are more consistent throughout the year. Low-income occupations include tailors, gardeners, carpenters and construction workers, cleaners and food vendors. Residents of South Dagon are also operating small businesses and shops or provide transport services -these people also mostly live in the south-western half of the township.

Beyond these areas of employment, two main trajectories can be identified. One of the major areas of occupation for low-income people are the factories in the industrial zones of South Dagon. These are located in the middle part of the township and factory workers mostly live in relatively close proximity to them. Another source of employment are construction sites that are located outside of the township's boundaries. Construction workers commute daily to other areas, mostly towards downtown or Hlaingtharyar township, where most of new developments take place. The travelling time to their work can be as long as two or three hours, and as such the distance from areas with construction activity become a big disincentive for people, who eventually decide to move out of South Dagon towards townships that are closer to their areas of work.



What if these people could work in South Dagon?

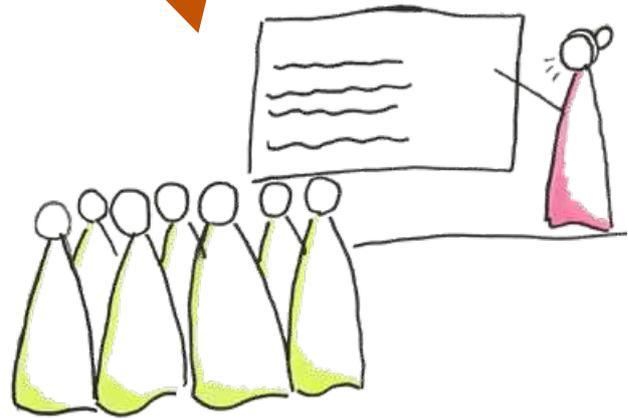
Without much urban development and construction activities happening in South Dagon, skilled people are leaving to other areas. Yet, if conditions would be favourable for them to find employment within their township, there would be benefits to both themselves and their communities, as well as the township as a whole. Low-income families could stay in their known neighbourhoods, have a better access to their jobs, increase their quality of life, as they would not spend too much time commuting, and contribute their services to their area of residence. At the same time, the township would benefit from the skilled labourers who can contribute in so many sectors and urban functions.

Our vision is that skill development and training centres become key areas of potential for capturing the value of people and communities.

In that vision, low-income families can improve their skills or acquire new ones, by sharing with each other or linking to diverse other stakeholders for trainings. Unskilled people could learn a new skill to start a small business and increase their income, and already skilled labourers would have the opportunity to develop further, or bring in more innovation into their work. Reducing the levels of poverty, recognising and capturing the value of everyone in the city and maintaining strong and skilful communities would turn South Dagon into an excellent example for the whole city towards sustainable and equitable development.

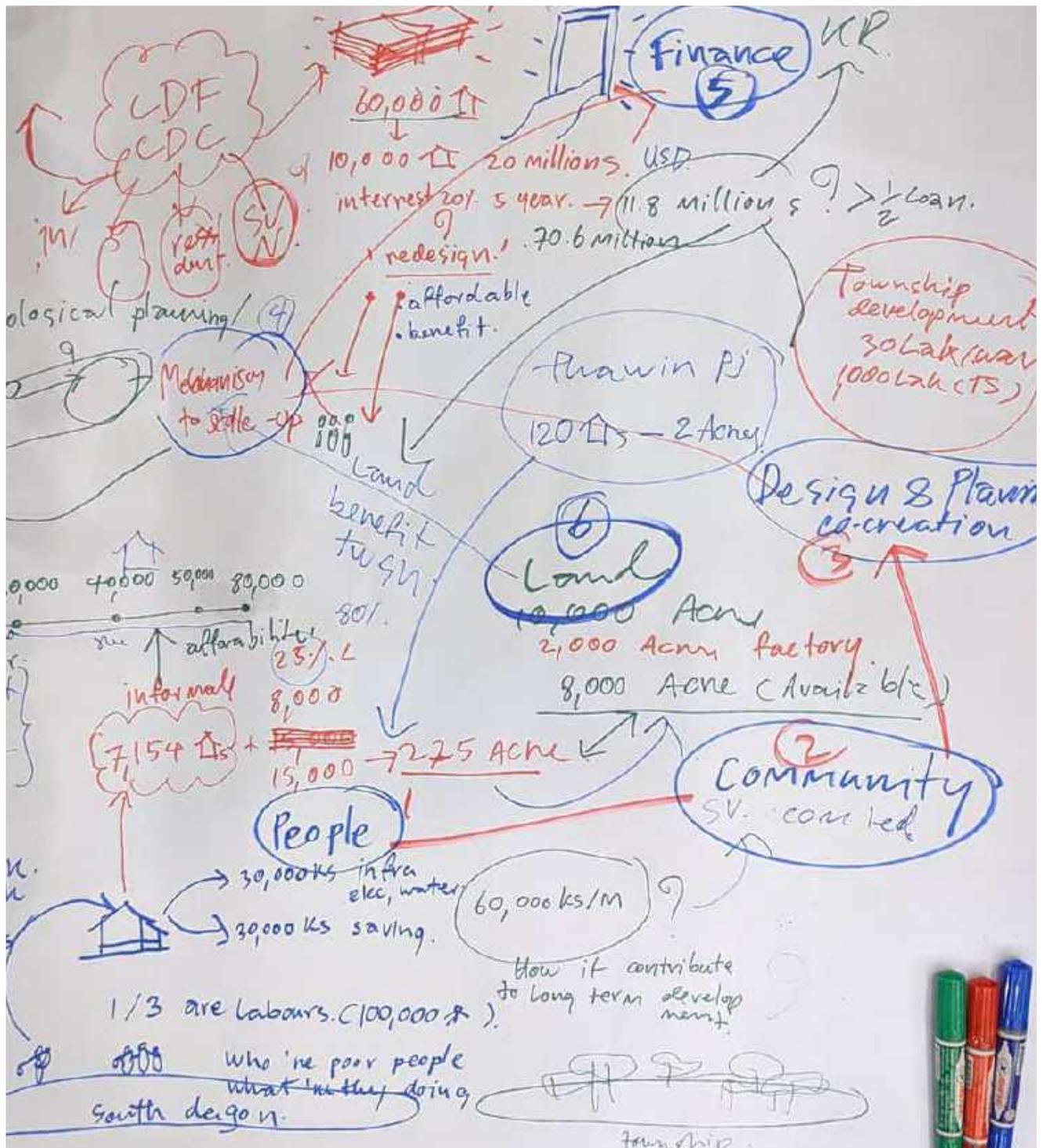


မတူညီသောလူစွမ်းအားအရင်းအမြစ်များအားမြှင့်တင်ခြင်း





STRATEGIES AT HOUSEHOLD, COMMUNITY, TOWNSHIP AND CITY LEVEL



Who are the urban poor and what are they doing in South Dagon?

The urban poor in Yangon are **not a homogeneous group**, sharing the same background and characteristics. They are diverse and have many other social identities. Some of them are migrants, coming from rural areas of Myanmar in search of employment; some have fled conflicts or natural disasters; some are daily workers who struggle to maintain a stable livelihood; some have suffered evictions and lost their social and economic networks. As South Dagon has some of Yangon's industrial zones, it is a common spot for such **migrant workers**. Out of that migrant population, around two thirds are factory workers who receive around 1,5-2 lakh Ks per month as a basic salary.

But there has been no systematic management of the increasing population, so informal settlements started emerging to accommodate people's need for shelter. Today, in South Dagon there are 7,154 households that are deemed informal and their dwellers are faced with many challenges and difficulties. To deal with those challenges, people started reaching out to each other, and forming groups in order to tackle some of their issues and find solutions for better housing and a better life. They can save around 30,000 Ks per month and with that, they can plant the seeds for their dream to start forming. Through the linkage with WfW these people can start building up hope, and slowly get to build their houses.

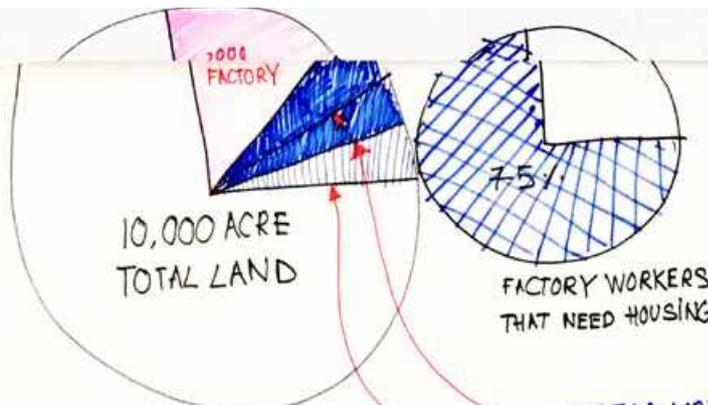
So far, informal settlers and low-income people have relied on loans for micro-finance companies in order to achieve that dream. These loans come with a high interest rate of around 22%. Under the current conditions, the interest from the loans of low-income people

flows to foreign banks, and is not captured in Myanmar. Our estimation is that in a period of 5 years, the amount of interest can amount to 13 million USD, and with that loss the hopes and dreams of the low-income communities and they citizens of Yangon more broadly are facing avoidable limitations.

What if there was an alternative model?

Our vision is that this capital could be used for house upgrading and development projects. The government can support this vision with some seed capital, which will be channelled to communities in the form of loans and, from there, part of the principal and the interest can be directed into upgrading projects at community, township and city scale.

As of now, there are 10,000 acres of land in South Dagon, 1,000 of which are occupied by industries. There is a big need for housing the factory workers. According to our estimations, which will be explained in the next sections in more detail, around 700 acres of land could be a solid starting point to solve the housing issue for South Dagon. These lands should be located in areas where basic infrastructures, services, and employment opportunities are available. Moreover, resettling the low-income dwellers in small groups or clusters tends to bring more benefits to both the communities, and the surrounding neighbourhoods. This would create better conditions for the integration of new settlers in the city, and would allow them to improve their livelihoods. The next sections propose how this can be achieved, in an inclusive, just and sustainable way.

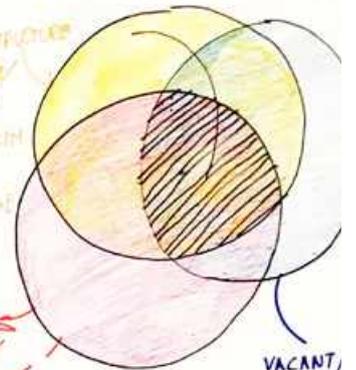


LAND AVAILABLE IN SOUTH DAGON

ONLY 700 ACRES NEEDED!
OF 1000 ACRES PROMISED

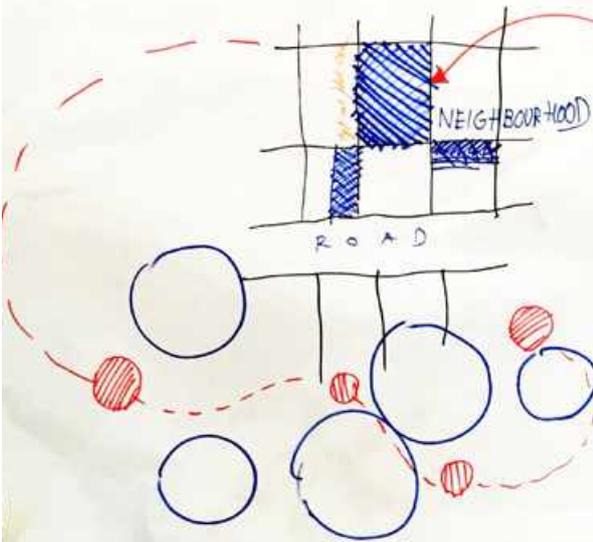
WHERE!

INFRASTRUCTURE
AVAILABLE
AVAILBLE
ELECTRICITY
WATER
DRAINAGE
ROAD



ACCESS
IBILITY

VACANT,
OWNERLESS



OPTIMUM COMMUNITY
SIZE 120 HH
ON 2 ACRES

DIVERSITY IN POSSIBILITIES
OF SIZE
1 ACRE? 1/2?

SUM OF SMALL
POSSIBILITIES



- COMMUNITY CENTRE
- HEALTH, CLINIC
- SKILL BUILDING
- SOCIAL LIFE

THE DIGNITY
IN COCREATION

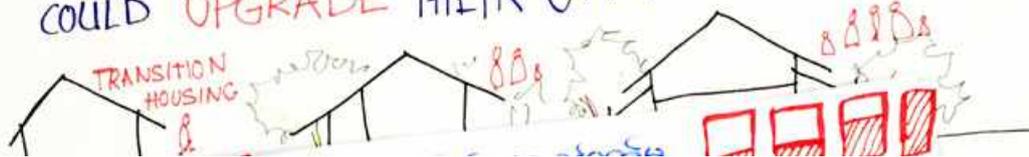
IDENTITY

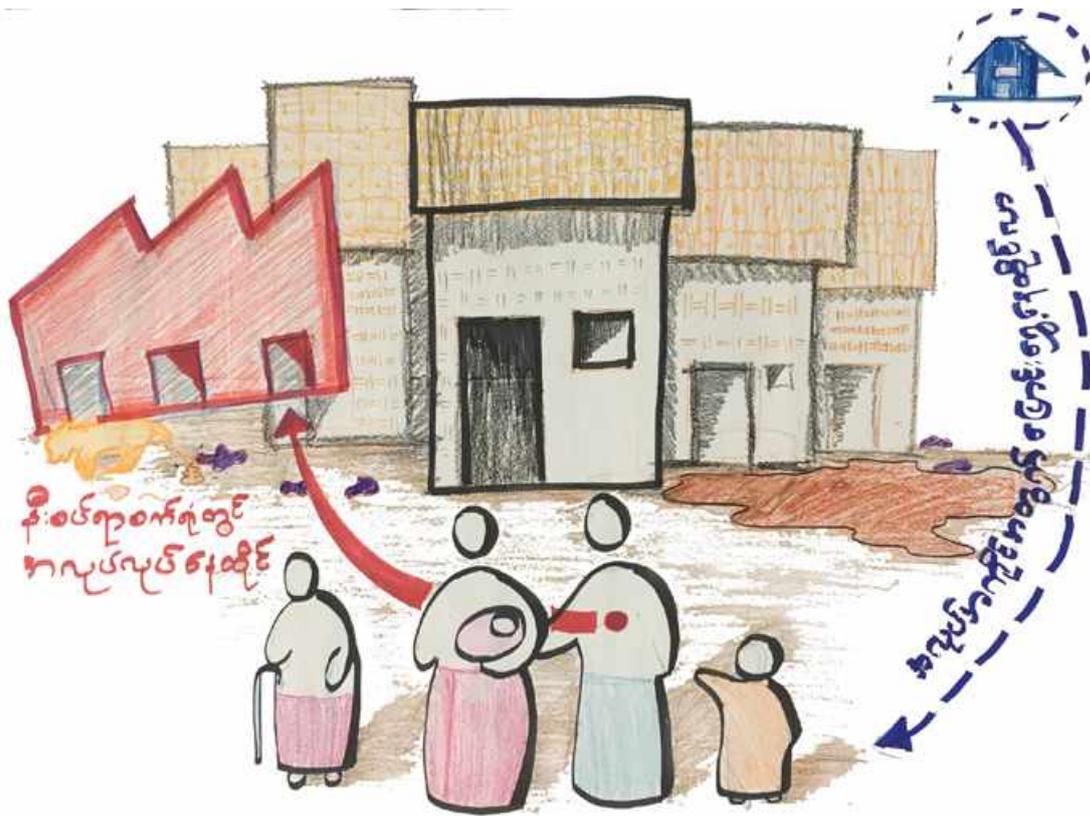
aspiration

SKILL

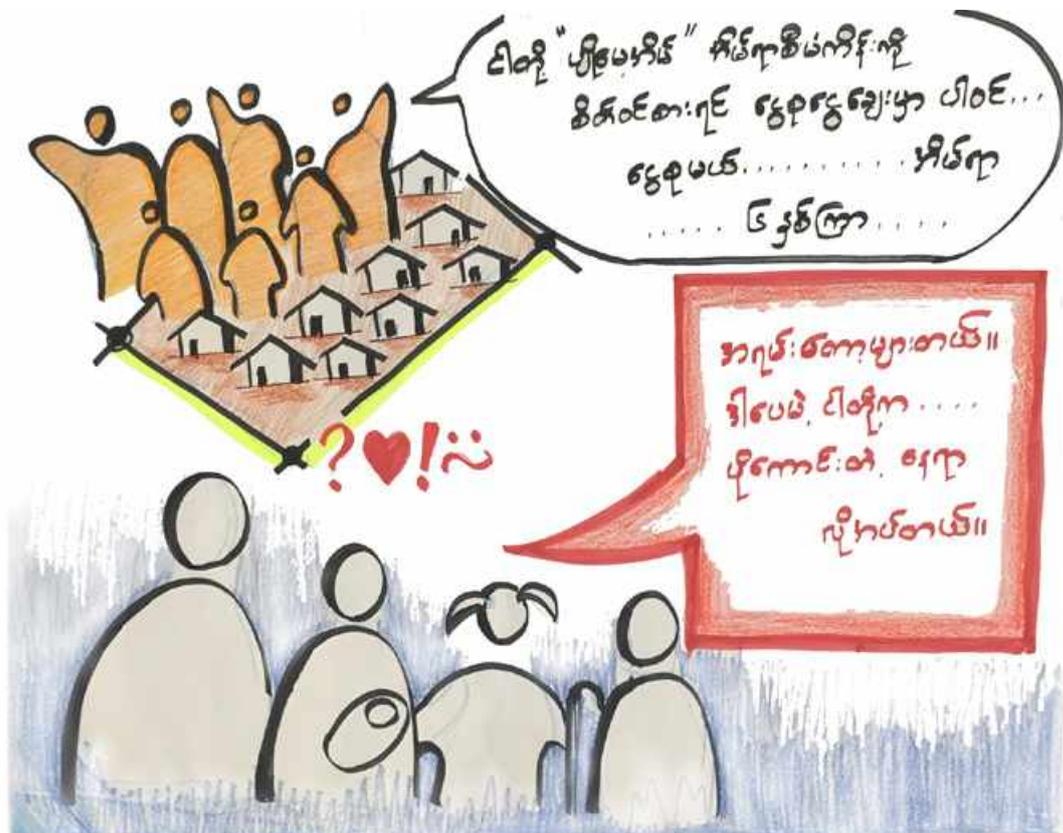
CAN WE THINK
OF A VISION
FOR SOUTH DAGON
TOGETHER

WHAT IF THE COMMUNITY
COULD UPGRADE THEIR OWN HOUSE?

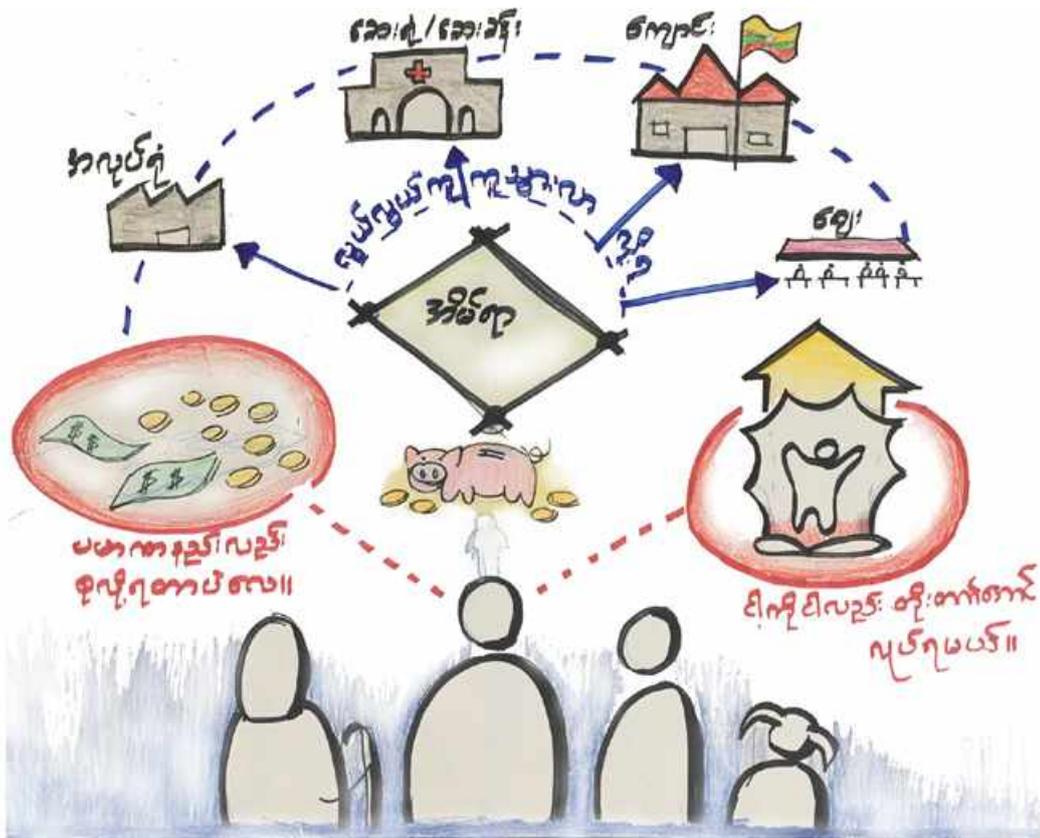




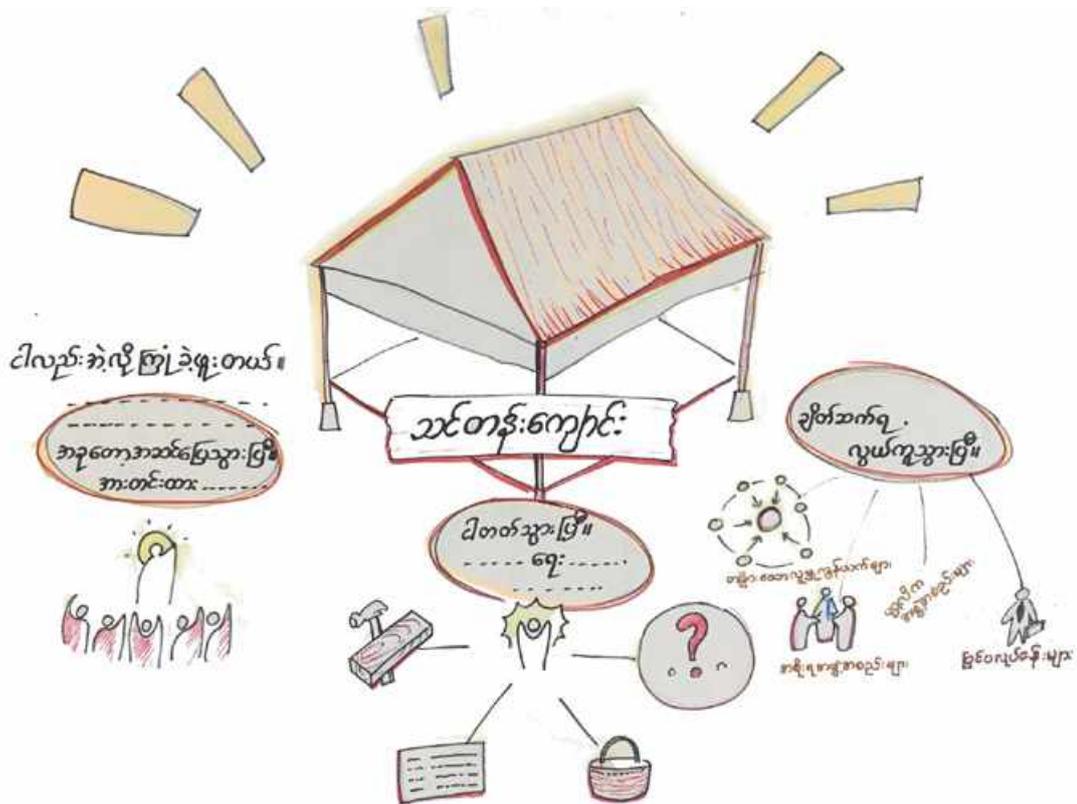
The search for employment opportunities is one of the main drivers of internal and external migration in Yangon. But the lack of affordable solutions leads people to bad living conditions.



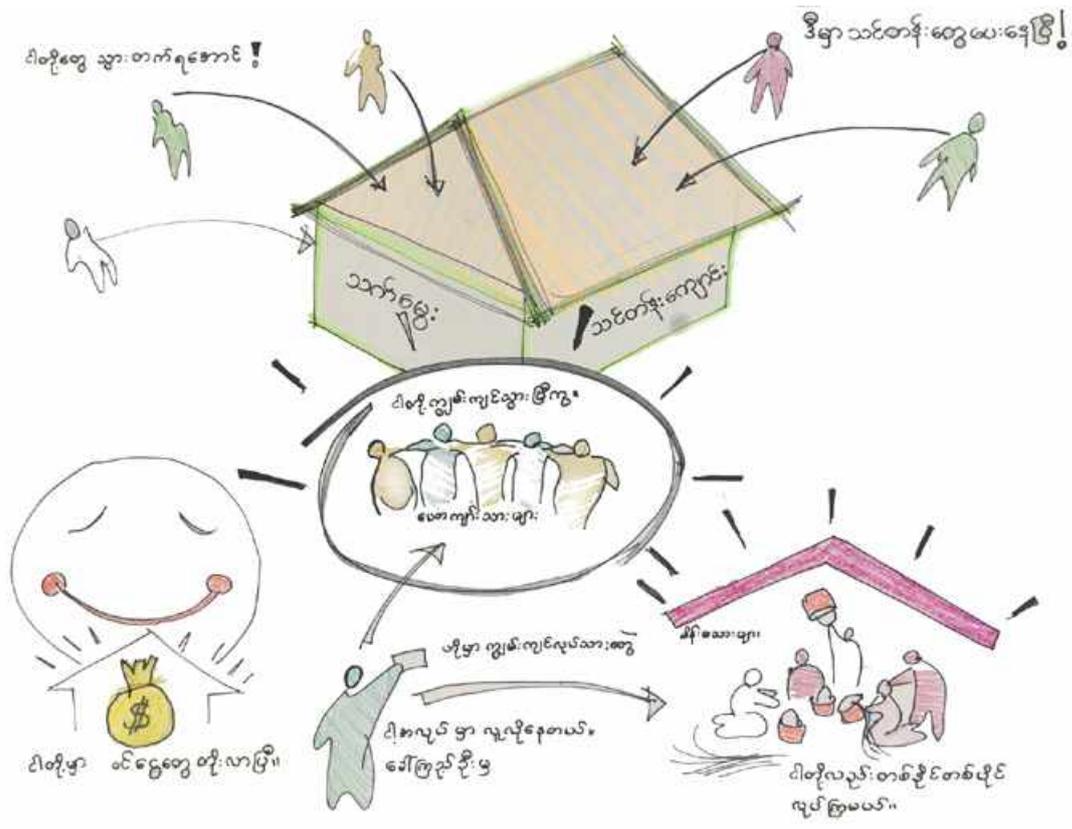
The duration of the community-led housing model can be discouraging to some, as people usually take 5-8 years to pay off the loan; but at the end of the process they can own their own house.



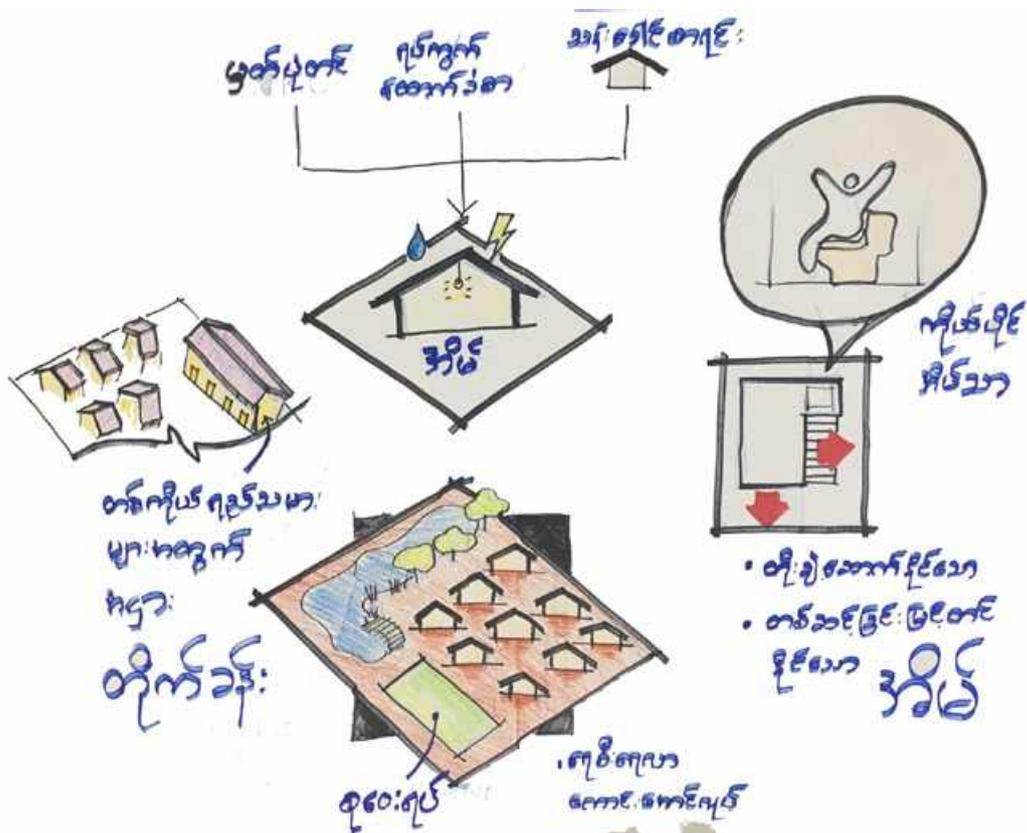
With collective saving people can have access to land and housing that is of better quality, and enjoy improved access to employment opportunities and urban services, like healthcare and education.



With a more stable living condition, people can focus their energy and time into developing their skills, getting more confidence and linking to other communities.



Building on the development of skills and the transfer of knowledge between and across communities can help people to increase their income and have a more stable livelihood.



Progressively, people can use their practical skills and their collective capacity for negotiating with authorities to get improved basic infrastructure, and upgrade their homes and communities.



Guidelines at household scale

Providing affordable housing to meet the needs of the economically poor people is one of the main challenges in the context of Yangon's urbanisation and population growth. Common low-cost and affordable housing is out of reach for the majority of the urban poor for reasons of affordability, and does not match their aspirations and needs. The typology of apartments is in many cases constraining people to exercise their lifestyles and at times even their job, as many are occupied in house-based activities. The experience of over 10 years in community-led housing development shows that people aspire for **their own four walls**, that they can start from a small and basic unit that they gradually improve.

Since people start off with very few resources, **incrementality** is highlighted as one of the most important aspects when planning and designing for community-based housing. This translates to several elements, that are explained below.

One of the key concerns relates to the **size of the plot** for an individual housing unit. With land being usually scarce, the plot size is often reduced to a bare minimum, in some cases as little as 10'x20', as seen in the example described above. Next to the obvious constraints on the size of the house, a small plot size limits significantly the possibility of the people to upgrade their house in a meaningful way. This is because one of the ways to improve their house, is to build a small **extension**, usually to the front or the back, once the savings are enough for that.

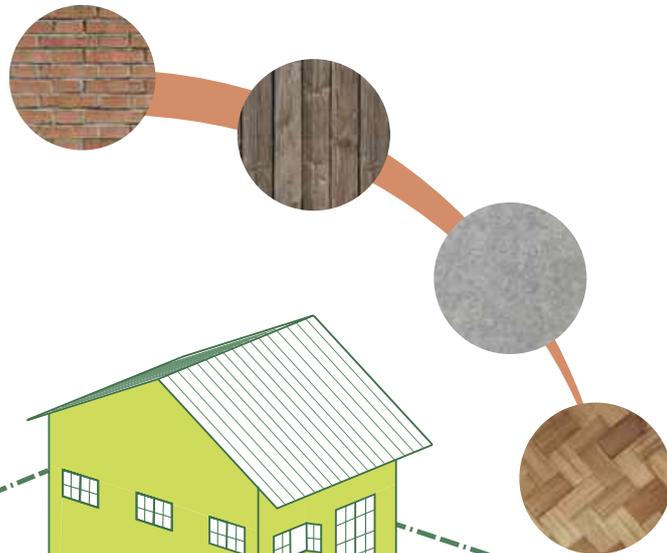
The incrementality can be furthermore reflected

in the progressive upgrading of **materials**. A housing construction that is designed smart and flexibly, can allow for an easier replacement of housing elements. Then, when people have the means, they can upgrade their house with more stable, more permanent materials that will give them a better living condition. Similarly, elements that are missing in the beginning due to high costs can be **added progressively**, such as the addition of an individual toilet, a shrine, or the opening of more windows.

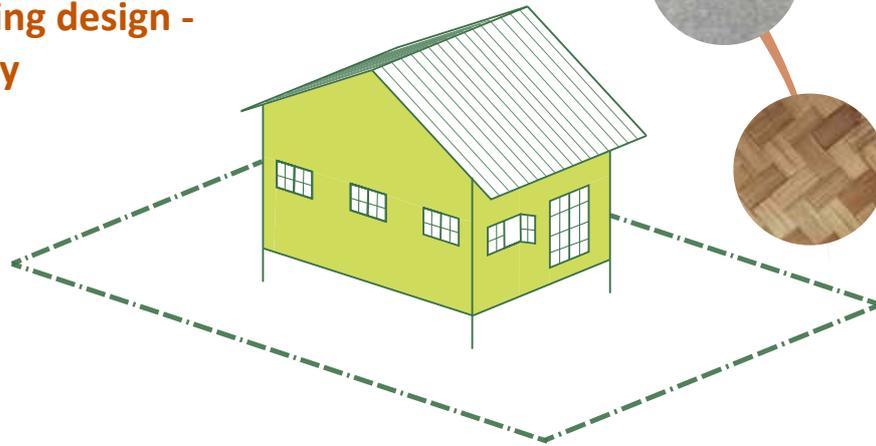
Another aspect to consider in the housing design is the use of materials. The appropriate choice can help to reduce costs, implement innovations, and increase the sustainability of both the house and the surroundings. For example, the use of **locally available materials** can reduce the costs for transportation, and also boost local businesses. Similarly, using **recycled or used materials** can be a smart way of cutting the budget and also reducing the ecological footprint of the city. Combined with the use of alternative and **unconventional building techniques**, the use of materials in the design of the house has the potential to improve the living conditions, create better environments, reduce the costs and unlock creativity and innovation within communities.

While these aspects can form some broad guidelines for designing low-cost housing, it is important to **collaborate with and listen to each community's needs**, as these may vary a lot.

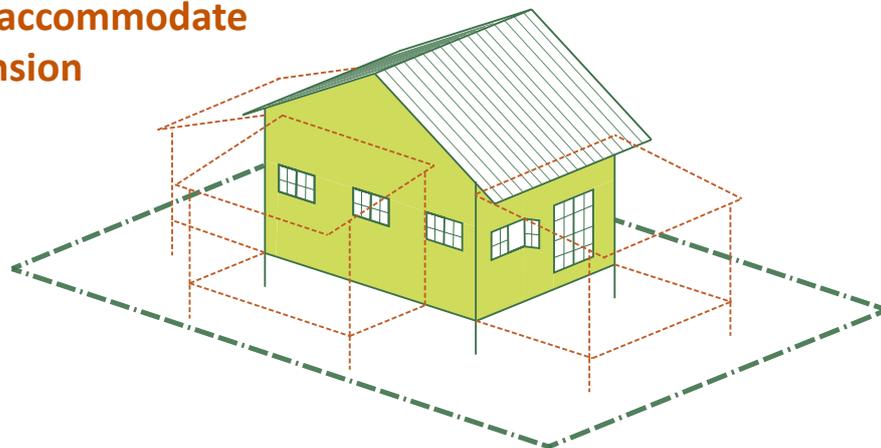
Things to consider when designing for community-based housing:



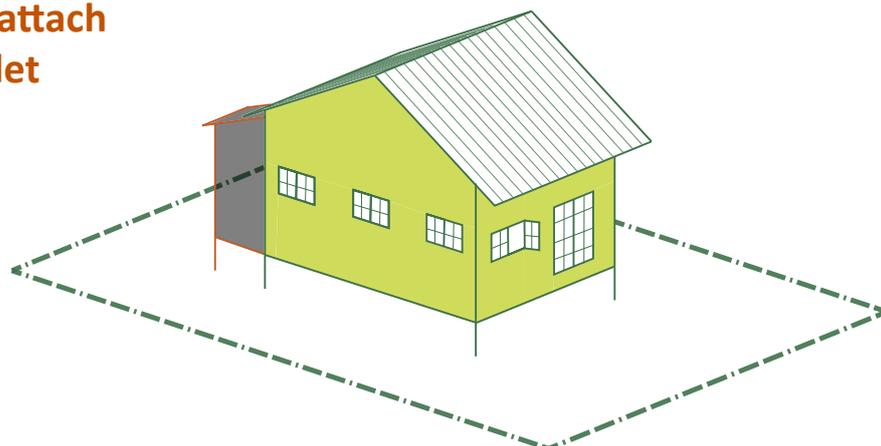
**Flexible housing design -
Incrementality**



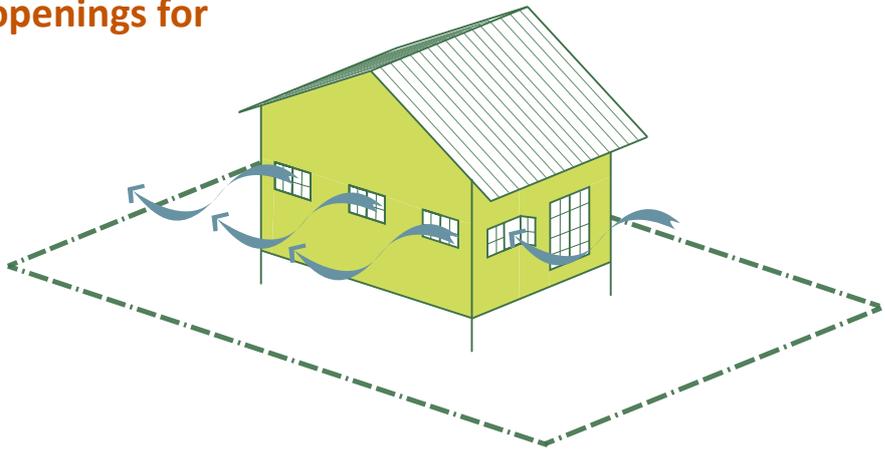
**Plot that can accommodate
housing extension**



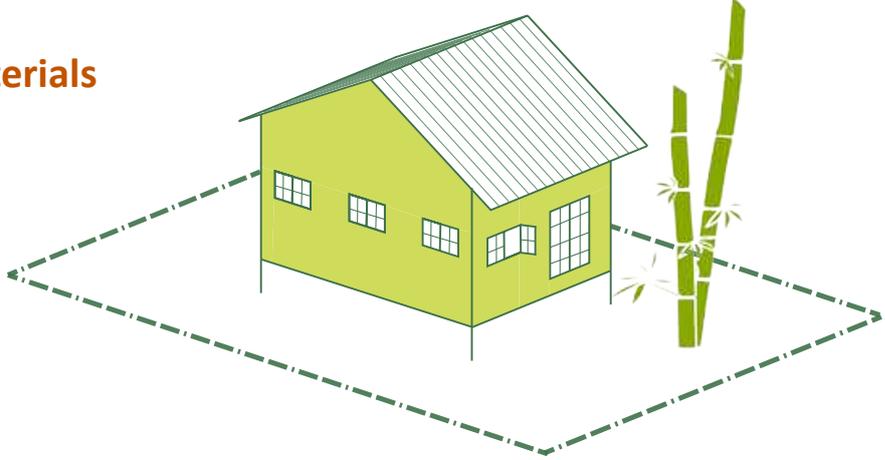
**Possibility to attach
individual toilet**



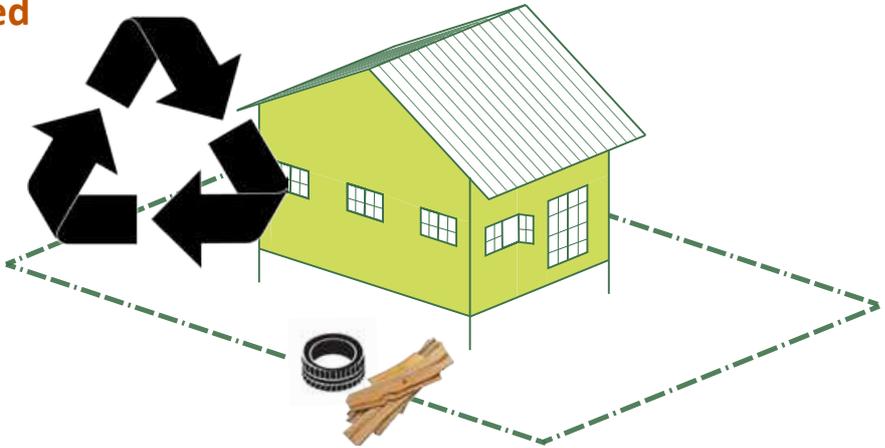
Appropriate openings for ventilation



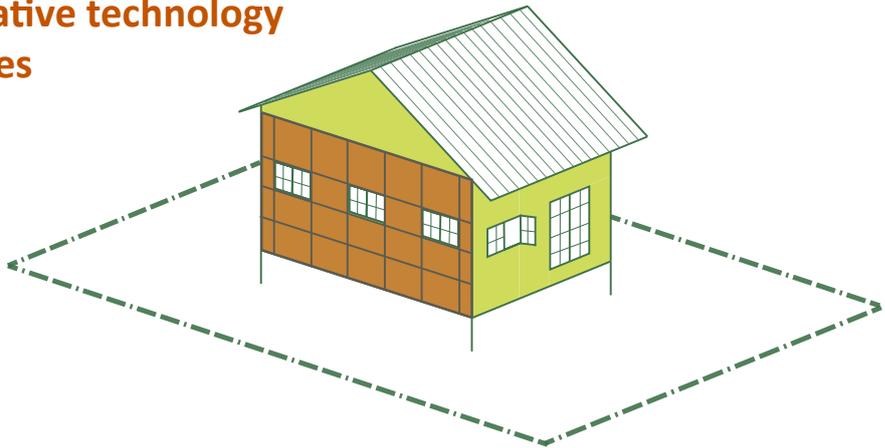
Use of locally available materials



Use of recycled materials



Use of alternative technology and techniques





Guidelines at community scale

Beyond designing a solid, affordable and flexible housing unit, it is important to think also at the scale of the community. For a community to become a sustainable and independent system, certain things need to be in place. This can be looked at from two points of view: the **material and immaterial infrastructures**.

The availability of **basic urban services** is key in achieving a certain standard that will allow the community to thrive. Having an adequate **drainage** system, drinking and domestic **water** supply and consistent access to **electricity** is elemental for people. An internal **waste management** and a waste collection system are also crucial to have healthy living conditions and a good environment. Without having resolved these aspects, a community risks being trapped in poor conditions, as the absence of each service leads to the accumulation of other issues. For example, the absence of a waste management system may lead people to dispose their waste in small vacant plots, in the drainage or in the creek. This in turn creates a much higher flood risk during the rainy season as waste blocks the drainage and does not allow water to flow.

These basic services should be ideally provided by the state, as every citizen should have access to them. Communities and authorities can collaborate towards solutions that are feasible for both sides: **adequate services at an affordable cost** for communities and the state alike. Trainings about the implementation and effective maintenance of such services can help communities in dealing more independently with their issues, and sustain better environments.

Next to these material infrastructures, it is just as important to nurture the development of adequate services for the **social and economic improvement** of the urban poor. This can be achieved by offering **spaces for social interaction**, negotiation and collaborative planning. Such a space can be a community centre, where residents can hold regular meetings to discuss their issues, but also host festivities, accommodate guests or just spend their free time. Another consideration would be the incorporation of **skill-sharing facilities**, workshops and/or training centres. There, people can benefit from sharing knowledge with each other and obtaining skills that help them improve their business or their livelihood more broadly. Also, people can have spaces within their community and in close proximity to their house where they can exercise their income-generating activities.

Incorporating these material and immaterial infrastructures when planning for the urban poor would have a huge positive impact of their lives.

Access to electricity network



Waste management and waste collection system



Collective or individual septic tanks



Adequate water supply



Good condition of roads



Main and secondary drainage system



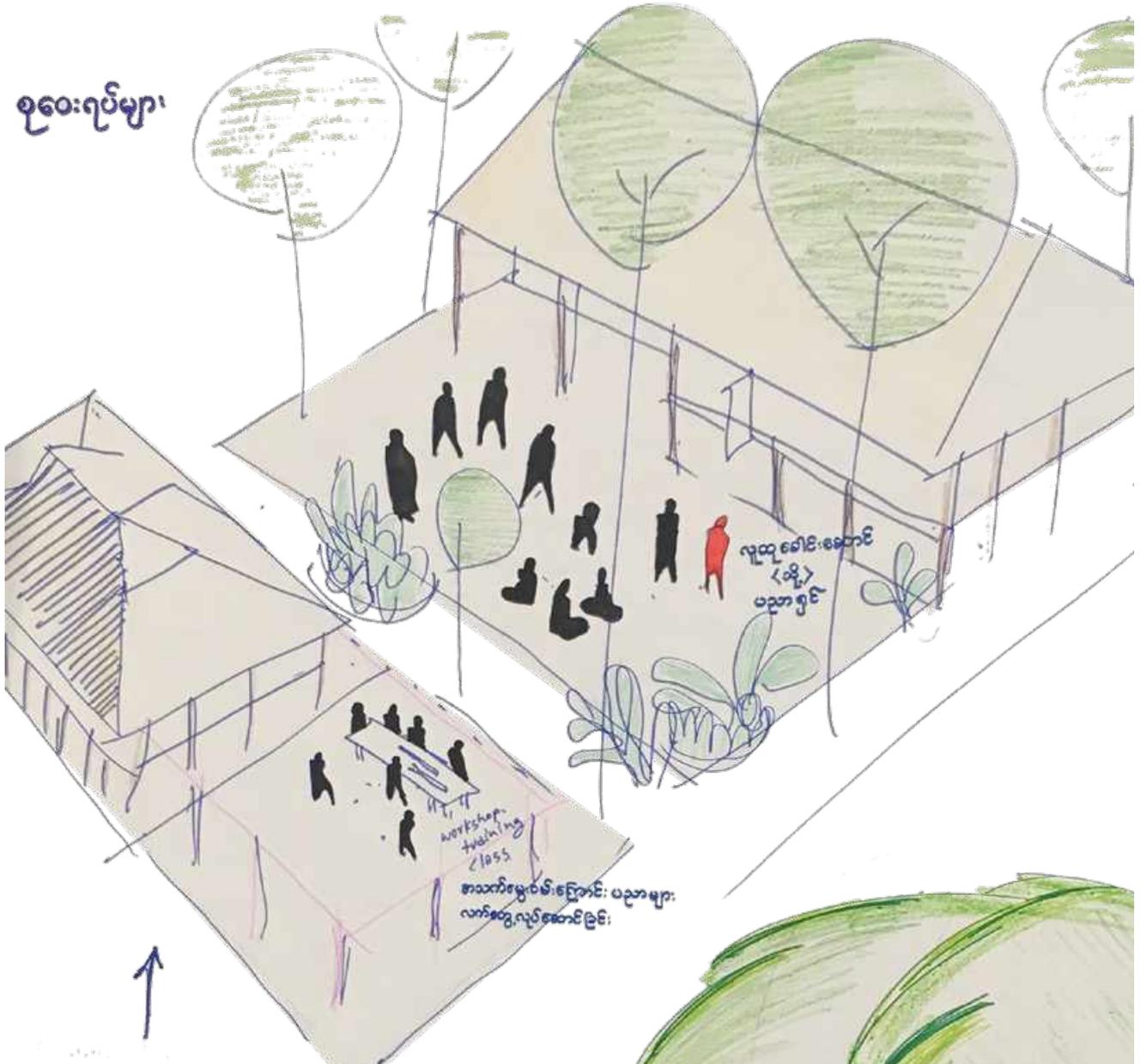
Community training centre



Integration of green and open spaces



စုဝေးရပ်များ



လူထု ခေါင်းဆောင်
<အိ>
ပညာရှင်

workshop
training
class
အသက်မွေးဝမ်းကြောင်း ပညာများ
လက်တွေ့လုပ်ဆောင်ခြင်း



အသက်မွေးဝမ်းကြောင်းပညာသင်ကြားရာနေရာများ

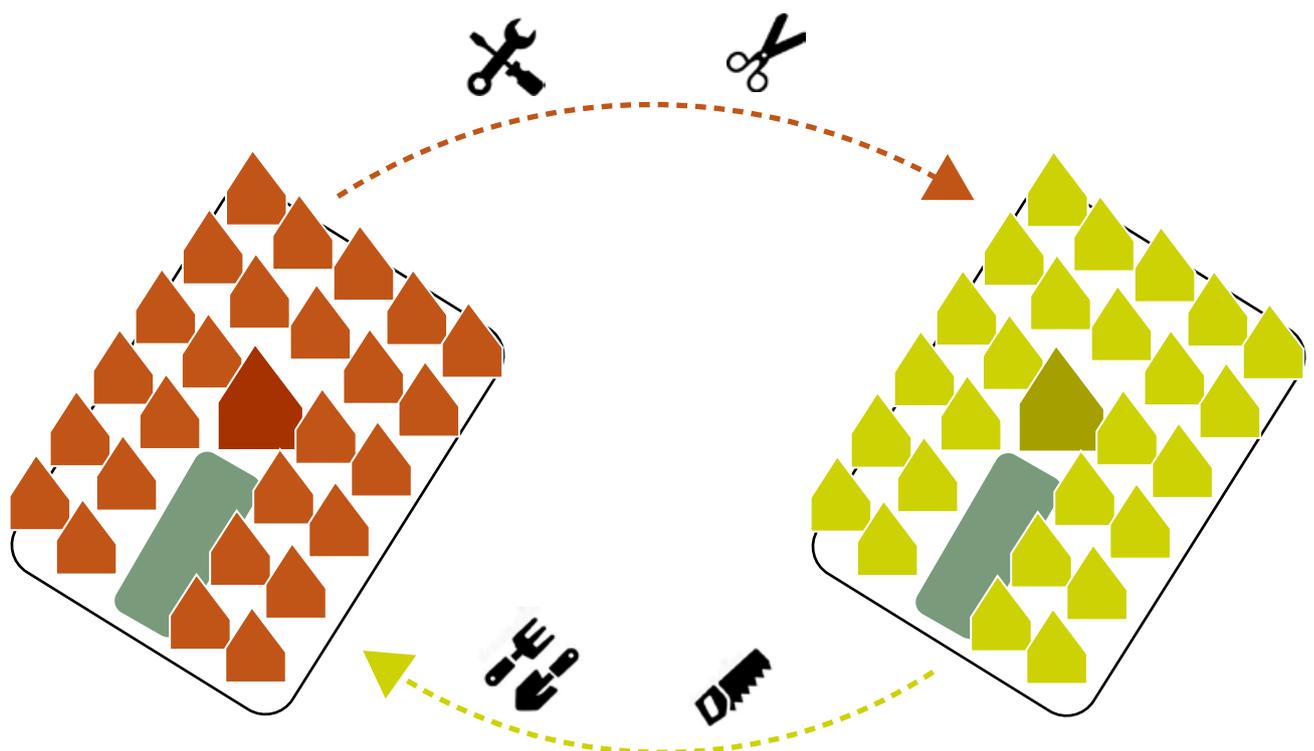


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Linking communities across and to the city

With housing and infrastructures in place, communities can further strengthen themselves by **linking to other communities** and to the rest of the city. As we have seen, many networks already exist, across wards and across townships. Communities can support each other by sharing knowledge and transferring skills to each other, from savings to construction techniques and crafts. For that, integrating **shared spaces** within or in between different communities could create an opportunity for these exchanges to happen in a more effective and nurturing way. Such spaces can be then used also for the implementation of different governmental programs, for example for the facilitation of trainings, important events, or more broadly for

the celebration of festivities by any community. Furthermore it is important to ensure that urban poor communities are integrated as **equally valuable parts of the city**, that enjoy a good level of accessibility to **employment** opportunities, **markets, healthcare** and **education** services, green and **open spaces** and **transport** networks. In turn, they contribute to each of this services, and to a functional and diverse city: they work at the factory, they commute with the trishaw or the ferry, they buy their groceries at the market, they organise donations and festivities, they bring their skills, knowledge and presence to so many urban functions and play their part in **vitalizing** the city of Yangon.





ပိုမိုကောင်းမွန်သောတောင်အုပ်မြို့နယ်



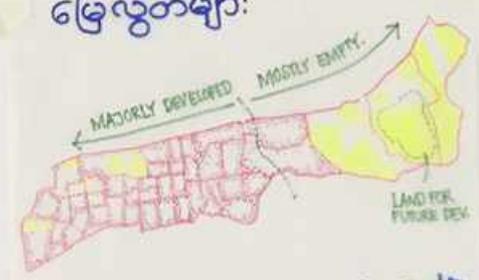
မြို့နယ်ဧရိယာ (၂၀၀၀၀ ဧက)

LAND AREA 20,000 acres



- 3,23,212

မြေလွတ်များ



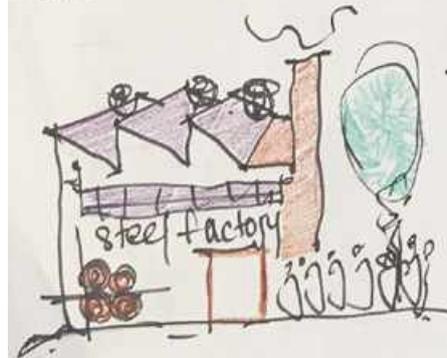
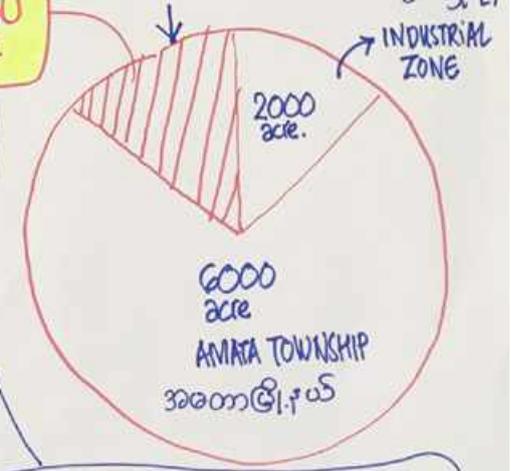
- 56,949

- 7,154 in Informal Settlement

VACANT LAND

10,000 acres. စက်မှုဇုန်

2000 acre



- 2092 factories

- 1,00,520 people

မြေနေရာသည် အစုံတန်သည်။

Strategies for land development at township level

Land Context of South Dagon Township

- South Dagon Township has approximately 20,000 acres of land, stretching from South-West to North-East.
- Most of the city's functions are concentrated in the South-West part of the township, such as industrial zones, community centres, markets, offices, institutions and housing.
- The North-East part of the township is mostly **vacant**, amounting to an area of approximately 10,000 acres.
- Within this vacant land, 2,000 acres are planned to be developed as an industrial zone, and further 6,000 acres are planned to be developed as the 'Amata Township' in collaboration with the developer Amata Group, from Thailand. The schedule for these developments is not clear yet.
- Therefore, the **remaining 2,000 acres can be used for other purposes of development**.
- The population of this township is 323,212 people and the total household number is 56,949 (GAD 2019).
- There are 7,154 households who live in informal settlement. It is not clear to what extent this number is included in the population data from GAD.
- At the moment, there are 2,092 factories in this township. It is estimated that 100,520 people are working in these factories.
- According to township authorities, most of them are living in the same township, although there are some workers who need to commute to different townships, such as Hlaingtharyar, by spending 2-3 hours travel in each direction by public bus.

How many houses do we need in this township in the future?

Based on these prerequisites and some assumptions, the total required land plot for housing is estimated as **697 acres**. This number was calculated as outlined below;

- Total number of factory workers: **100,520 workers**
- Number of members who work at a factory per household (*assumption*): **2.5 members / hh**
- Number of households whose member(s) work at a factory (*assumption*): $100,520 / 2.5 = 40,208$ hh
- Ratio of factory-households that require alternative housing (*assumption*): **75%**
- Number of factory-households that require alternative housing: $40,208 \times 0.75 = 30,156$ hh
- Existing informal settlements: **7,154 hh**
- Total number of households in need of alternative housing: $30,156 + 7,154 = 37,310$ hh
- Required plot per household (*based on WfW's housing projects from 2009-2017*): **800 sqf / hh**
- **Total required land for alternative housing:** $800 \times 37,310 / 2.29568 = 697$ acres

How to develop required housing in this township?

With 2,000 acres of vacant land only inside South Dagon, it appears that there is enough land that can be allocated for the development of affordable housing (697 acres needed based on our estimations from above). There are mainly two different pathways to upgrading the settlements of urban poor people: **resettlement** to a new site, or **on-site upgrading**. The two options have different potentials and challenges, and our recommendation for South Dagon -and Yangon more broadly- is on-site upgrading for reasons that are explained below.

First, resettlement can be much more demanding of **resources**, as in many cases massive development is needed on a vacant land plot with lack of basic urban services. The government would have to provide infrastructures, like electricity, drainage, water and sanitation, accumulating to big costs. Also, the development of housing might limit future land uses; for example when Amatha development will actually take place, it might have unintended consequences on other developments.

Resettlement has obviously significant implications also on the dwellers: on their livelihoods, social connections and quality of life. Depending on the distance from their area of origin and also the level of services and opportunities in the new site, people might experience many challenges caused by relocation, even though they might have a better-quality house. If resettlement should happen to the existing vacant lands within the township, the **accessibility** of many other city functions would be impacted negatively.

Furthermore, relocation often has a negative impact the **social relations** between a community and its surroundings, and may disrupt the personal and communal networks of dwellers. Also, an unknown context means that residents might lack the necessary information and networks to maintain a stable **livelihood** since establishing a network of clients or partners,

and belonging to a community can take time. In addition, if large plots of land are available in the vacant areas, and they are allocated exclusively for the development of low-cost housing for the urban poor, the social mix that exists today in South Dagon will be constrained and people will experience the effects of both **social and spatial segregation**.

Admittedly, resettlement is not always avoidable, despite its negative implications. In cases where the current location and conditions of land pose a direct threat to the community (for example high disaster risk) resettlement may be necessary to ensure the well-being of residents. If resettlement is presented as the only viable option, there should be efforts to ensure that the new site is in **proximity** to the original one, and also within areas that are **integrated in the urban fabric**. Unless the township has enough resources and the readiness to invest in better infrastructure and accessibility, as well as opportunities for livelihood restoration and community development, resettlement practices will cause further inequality within the township.

From a social perspective, on-site upgrading can maintain a good access to people's employment areas and the urban services they normally use, like schools and clinics. As most informal or poor areas are encountered as smaller or bigger pockets within the city, people can have better access to city functions compared to a development on vacant and remote land. People can improve their living conditions without losing important assets, like their know neighbourhood, surrounding communities, their customers and competitors of their business. Also, as these pockets of land are comparatively small and scattered across the township, they allow to mitigate social segregation and the creation of 'ghettos' of urban poor people in massive developments. As such, social mix and interactions with other city functions can be encouraged and nurtured.

The better access to city functions, information, interactions and knowledge of the neighbourhood can also encourage further

A) Massive Development in Vacant Land

မြေလွတ်ပေါ်တွင် အိမ်ရာစီမံကိန်းများ တိုးချဲ့ဆောက်လုပ်ခြင်း



△ COST FOR INFRASTRUCTURE

အခြေခံအဆောက်အအုံများ တွက်ကုန်ကျစရိတ်



△ LIMITING FUTURE LAND USE

အနာဂတ်မြေသုံးစွဲမှုများကို ကန့်သတ်

△ UNEQUAL ACCESSIBILITY

အခြေခံလိုအပ်မှုများ မမျှတခြင်း

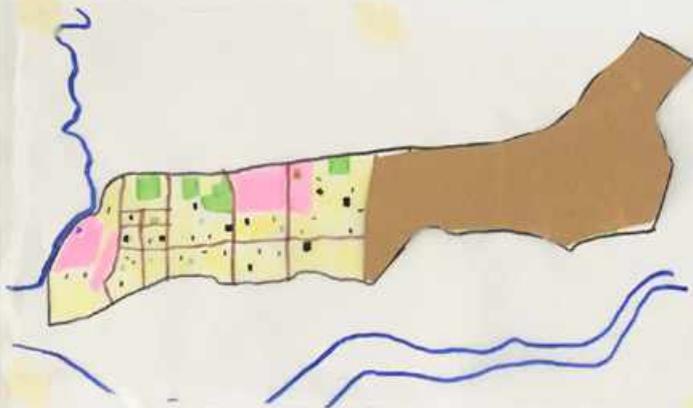
△ SOCIAL SEGREGATION

အဆင့်အတန်း ခွဲခြားထားခြင်း



B) In-Situ Upgradation

အဆင့်မြှင့်တင်ခြင်း



- LOWER INVESTMENT

ရင်းနှီးမြှုပ်နှံမှု ခံညံ့ခြင်း

- COMMUNITY'S INFRASTRUCTURE

ပတ်ဝန်းကျင်စာရိတ္တအတွက် အခြေခံအဆောက်အအုံများ

- BETTER ACCESS

ပိုမိုကောင်းမွန်သော သွားလာမှု

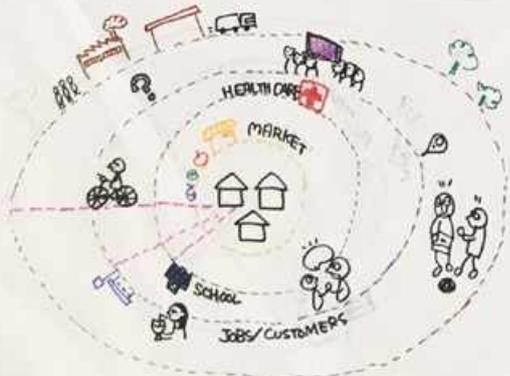
- SOCIAL MIX / INTEGRATION

အတူတကွ ပူးပေါင်းနေထိုင်ခြင်း

- SOCIO-ECONOMIC ACTIVITIES

လူမှု-စီးပွားရေး ဆိုင်ရာ

လုပ်ဆောင်မှုများ



socio-economic activities and entrepreneurship among the people.

For example, let us imagine one family that upgrades their house. They might buy some additional material from a local shop to renovate the house's façade and accommodate a small business. The mother of this family might start her food shop now, targeting the neighbours and passers-by. She might use the motorbike taxi regularly to visit the wholesale market to continue her business. Her food shop might become a place for the neighbours to exchange information, gossip or just spend time together. These social interactions can gradually nourish their feeling of safety, community and mutual understanding.

How to choose the land for upgrading?

In-situ upgrading is expressed here as the option of either a) re-blocking and improving the houses on the same plot if conditions of tenure are clear and also the site does not present any threats to the community, or b) identifying a plot of land in the same neighbourhood, in very close proximity to the original site, in order to avoid all the negative implications of resettlement. When choosing a land plot for that, we recommend considering following criteria for suitability:

Size: From the experience of WfW's housing projects, an average of 120 households per 2 acres of land emerges as a ground guideline for the settlement's density. The smaller the plot size, the more plots should be planned.

Accessibility: Proximity to city functions, like markets, school, employment, hospital, public administrative offices, public transport, spaces for leisure, other people/communities, socio-cultural experiences.

Infrastructure: Availability and condition of water and electricity supply, drainage, sanitation, roads.

Safety: Risk of fire, flooding, eviction, air-, soil- or water pollution.

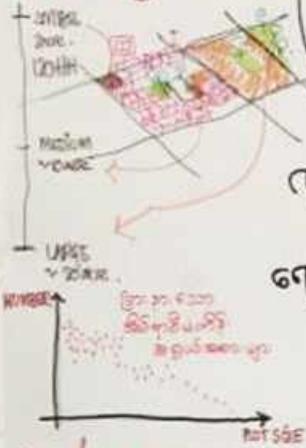
Type of land: Ownership status, land type (residential, agricultural, village ect), possibility to get permission of change the land use to residential.

Where can we find this land?

As an example, we attempted to identify potential sites for upgrading by looking at Google satellite images. During this exercise we identified several plots within the south-western (inhabited) part of South Dagon, that appear to not have physical structures on them. Each plot is under 2 acres. Although this exercise was obviously simplistic, and in real conditions careful studies would be needed to survey the vacant land plots and their suitability, it is indicative of the potential to implement affordable housing development with the urban fabric, and achieve a richer social mix and integration. The criteria mentioned above would be necessary to confirm in that case.



HOW TO CHOOSE LAND?



WHERE CAN WE FIND THIS LAND?

ယခုကဲ့သို့ မြေနေရာ
ကို ကျွန်ုပ်တို့ ဘယ်နေရာ
တွင်တွေ့ရှိနိုင်ပါသလဲ?

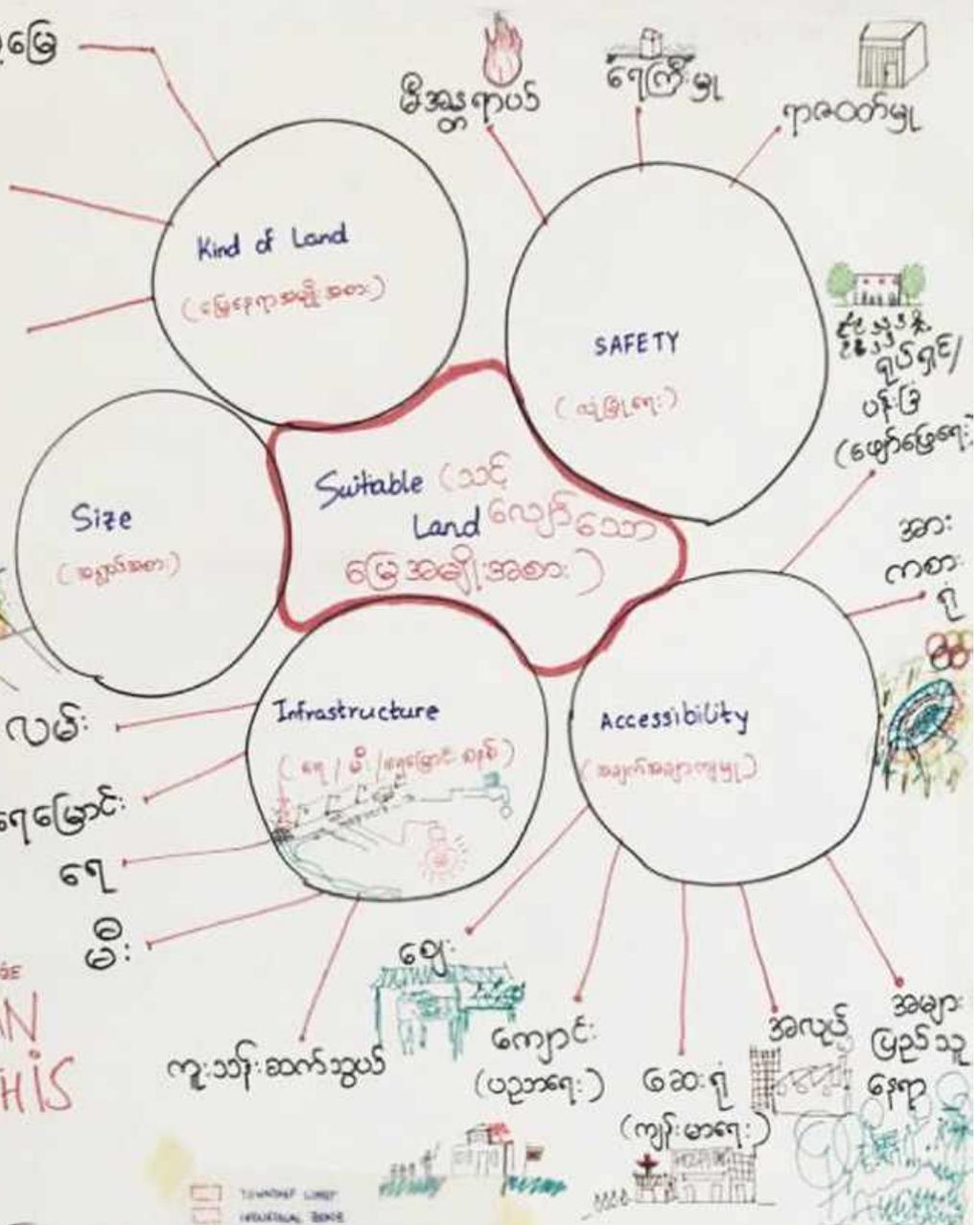
CONCEPT

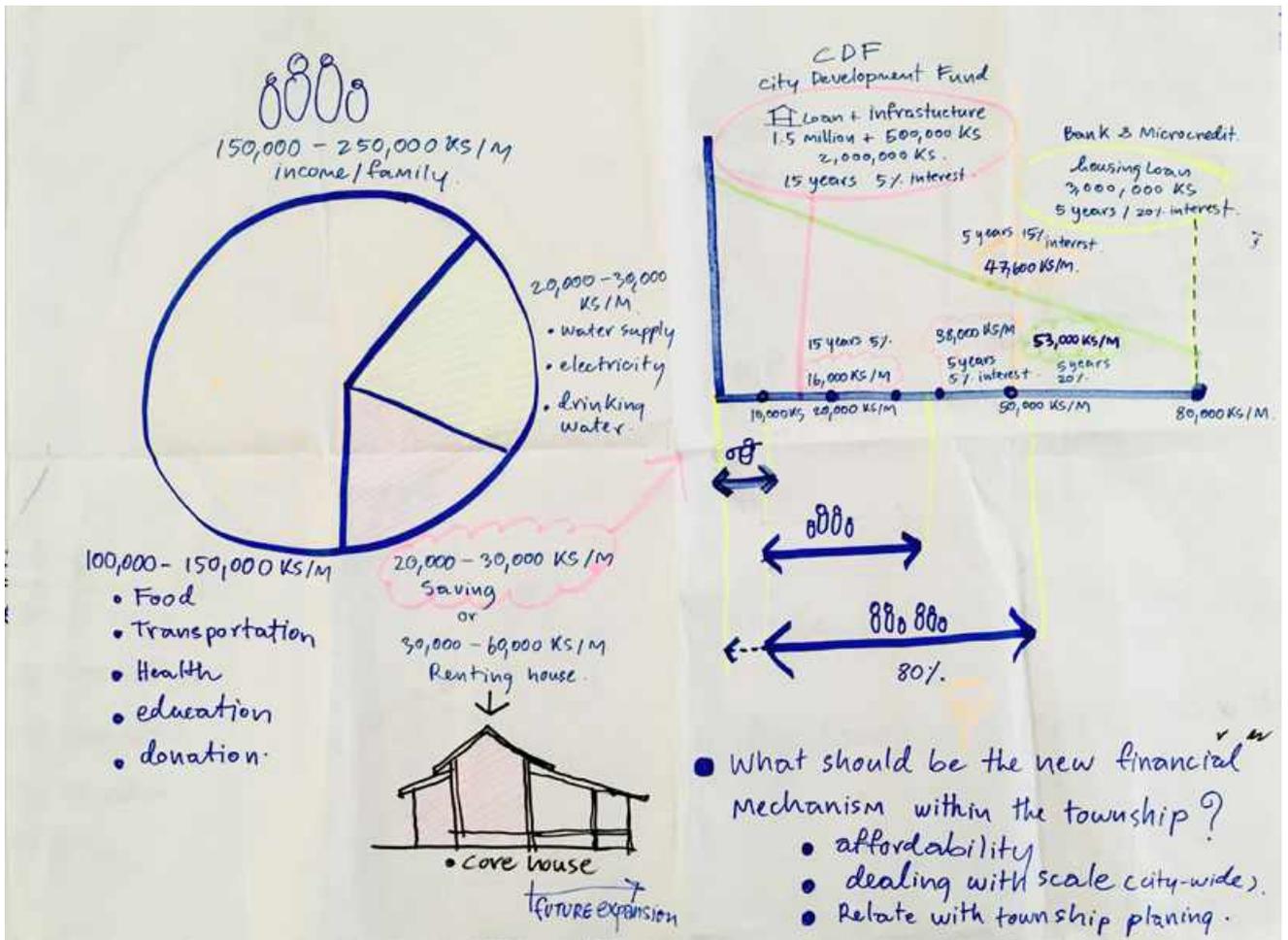


- TOWNSHIP LINE
- INDUSTRIAL ZONE
- NON BUILT AREA - TOWN, ENCLAVE, CANALINE
- NON BUILT AREA - OTHER (AVAILABILITY)
- NON BUILT AREA - PARTLY OCCUPIED
- NON BUILT AREA - NOT SURVEILED YET



PROBABLE SITES FOR SELECTION →
ရရှိနိုင်သော မြေကဏ္ဍနေရာများ





Strategies for finance at township and city level

This proposal focuses on the potential to utilize the amount of interest from the housing loans as a City Development Fund (CDF).

Existing Situation of Finance

According to the survey of WfW and the WSGs, the average **monthly income** per household of informal dwellers is **150,000-250,000 Ks**. Within this amount, 100,000-150,000 Ks are spent for daily expenses such as food, transportation, health, education and donations. Further 20,000-30,000 Ks are spent for basic services, such as water and electricity. In the case of people who live in the community-led housing projects, 20,000-30,000 Ks are saved monthly to repay the housing loan. With these savings people can also invest in upgrading their house. In the case of renters, there is no saving activity, but a monthly payment for the rent ranging between 30,000-60,000 Ks instead.

Currently, the cost for the community-led housing project is taken as a loan from private micro-finance institutions (MFIs). Here, we refer

to figures from previous community-led housing projects as an example for the simulation. The conditions for each case are outlined below. As shown in the last column, the current scheme requires a **large amount of interest** to be paid. The key idea of our proposed model lies in using this amount as a revolving fund.

Instead of a model that primarily benefits the MFIs, we propose that the **city gives out loans to communities** and the capital revolving in the process of the loan (principal and interest) can become a resource for the **development of the township** and the city, while addressing the issue of affordable housing in a people centred-way.

What is a City Development Fund?

A CDF is an alternative financial mechanism which will use a fund (here, part of the principal and interest from the loans) for development projects -including housing- at township scale. The city will pool some seed capital and allocate that for the distribution of loans to low-income people for the development of housing. People can take

Interest rate	Repayment term (years)	Loan amount	Monthly payment	Total payment	Total interest paid
5%	15	2,000,000 Ks	15,816 Ks	2,846,857 Ks	846,857 Ks
5%	5	2,000,000 Ks	37,742 Ks	2,264,548 Ks	264,548 Ks
20%	5	2,000,000 Ks	52,988 Ks	3,179,266 Ks	1,179,266 Ks
15%	5	2,000,000 Ks	47,580 Ks	2,854,792 Ks	854,792 Ks
20%	5	3,000,000 Ks	79,482 Ks	4,768,899 Ks	1,768,899 Ks

a loan from CDF at an agreed interest rate. Since a large number of housing units is planned for the township (10,000 units in five years), there will be an adequate amount of interest and principal, which can be utilized in an affordable and sustainable way for further housing projects and other common purposes, like infrastructure development or social services.

How does CDF operate?

CDF functions as a revolving fund which circulates loans, principal and interest between CDF and the communities. This would become a self-sustained finance mechanism, where more flexible investments can be made in areas where the communities or township see as fit. As an example, the following scenario shows a 1-year test operation. We recommend that this should be the minimum setting to start thinking for new financial model for most of the poor can afford to build their houses.

Conditions

- 10,000 houses are planned to be built in 5 years. $10,000 / 5 = 2,000$ houses per year.
- Cost for one house: **1.5 million Ks.**
- Cost for infrastructure per household: **0.5 million Ks.**
- Amount of loan needed per household: $1.5 + 0.5 = 2$ million Ks.

From the interest

- We assume an **interest rate of 8%** per year (0.67% per month).
- **Total interest** (after 15 years of repayment) per unit will be **1,440,347 Ks.**
- Out of this interest, we suppose $3/8$ (37.5%) will be used for the **community network**, the rest $5/8$ (62.5%) will be pooled in **CDF**. $1,440,347 \text{ Ks} * 0.625 = 900,217 \text{ Ks}$.
- Out of this amount, we suppose **60%** goes to CDF for **housing loans**. This will be $900,217 * 0.6 = 540,131 \text{ Ks}$. The remaining 40% will be spent for operational costs of the CFD.
- There will be 2,000 units per year. $540,131 \text{ Ks} * 2000 = 1,080,250,627 \text{ Ks}$.
- At the end of the first year, there will be

118,049,779 Ks from the interest, which can be used for the CDF housing fund. This can generate **59 housing loans**.

- The total payment from the interest from all houses can rise because the number of houses will increase in 5 years. When all 15-year repayment cycles for 10,000 houses will be completed, 2,700 housing loans can be generated from CDF. This means an average of **180 housing loans** per year, for 15 years.
- For the first 5 years, the interest payment can generate an average of **167 housing loans** per year.

From the principal

- Suppose **60%** of principal goes to the **housing fund** in CDF. Another 40% goes for operation costs of CDF.
- From the first year, the principal repayment for capital fund will be 86,348,329 MMK ($43,174.16 * 2000 * 0.6$) which can be used for the housing fund. This can generate **43 housing loans**.
- Same as the interest, the principal increases over the years because the number of houses increases. When all 15-year repayment cycles for 10,000 houses completed, there will be a 20 billion MMK repayment. 60% of that can go to the housing fund = 12 billion. This can generate an average of **800 housing loans** per year, for 15 years.
- For the first 5 years, the principal repayment can generate an average of **144 housing loans** per year.

To sum up, this CDF model can support $36 + 43 = 79$ houses for the first year. By the end of 5th year, if all the repayments goes as planned, this scheme can generate $(167 + 144) * 5 = 1,555$ housing loans in total. By this time, the housing development will have been completed in this township, so this fund can be utilized in the development of other townships.

The above example is aimed to illustrate one possibility. The actual numbers (interest rates, repayment terms, percentages for the CDF etc) can be discussed and modified to align better with the local context.

Impressions of co-creation







