

The Bartlett Development Planning Unit



UCL

**MSc Building and Urban Design
in Development
Student Report**

**Collaborative
Infrastructure Upgrading**

In partnership with WFW, ACHR, CAN, YTU
and AMA



dpu
Development
Planning Unit

**MSc Building and Urban Design in Development
Student Report**

Yangon, Myanmar: Transformation in a time of Transition
May, 2018

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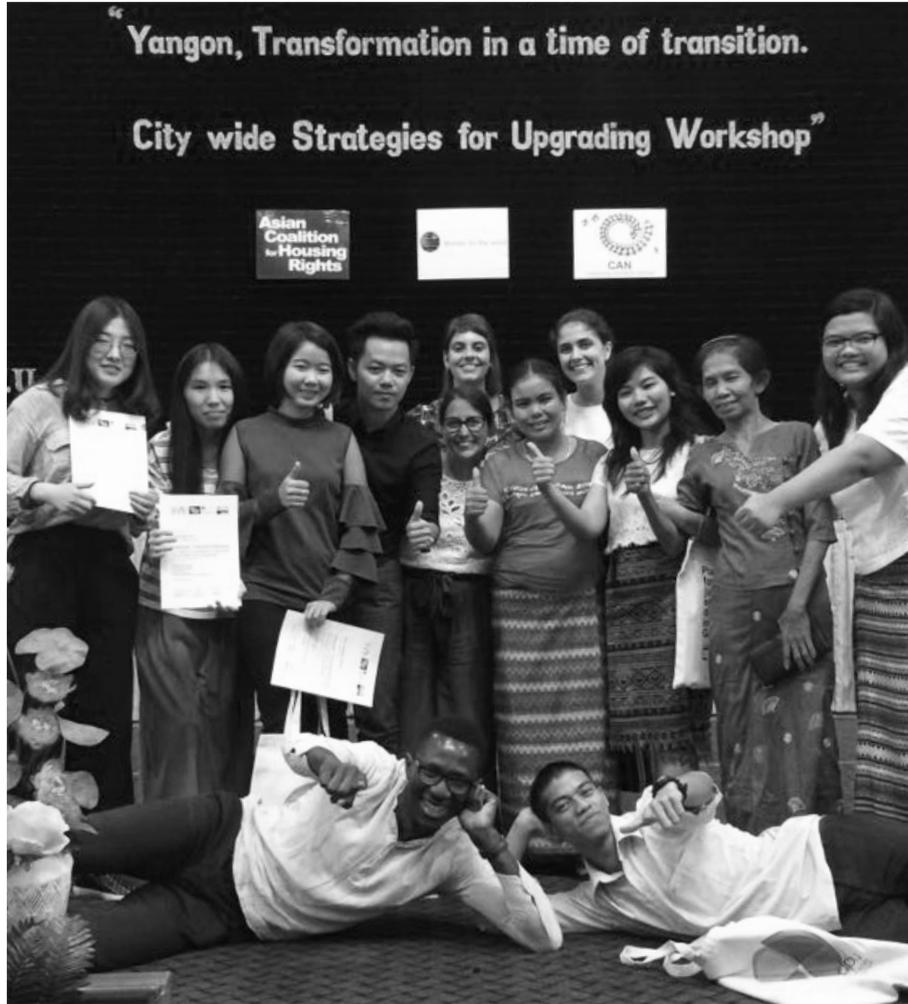


Fig. 0.1 - Ugradation Team photograph

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0.1 Executive Summary

This report is a result of a collaborative exploration of Yangon's city making practices. Students in DPU's BUDD program, along with local students at YTU and Bithukar, and local community members of Ward 67, worked together in an effort to unveil some of the current practices of space production in Yangon. This was done with the help of AMA collaborators, and partners from WFW, ACHR, and CAN. An in-depth critical reflection on the multiple urban dynamics of contemporary Yangon, this study navigates through complex political social and economic networks of the city, township and ward in an effort to frame spatial strategies for city-wide upgrading within existing governance structures and processes.

The report begins by looking at Yangon's urban transitions and transformation, guided by Myanmar's political, physical, social and economic transitions. It then aims to shed light on the insufficient model of state-led provision of services and the disregard of alternative housing processes in informal settlements, in order to highlight Yangon's housing crisis as a key issue to address.

In our theoretical and analytical framework we narrowed our focus towards upgrading of infrastructure, understanding infrastructure as physical, social, and economic. Re-framing our understanding of informality and formality as non-binary and interconnected practices, we looked at the opportunities that arise as a result of social and institutional collaboration. Our main research question asks how collaborative upgrading of infrastructure can contribute to alternative housing processes.

The findings presented in this report are a result of diverse methods of engagement that took place in and Pyait Taing Taung and Ward 67. Looking specifically at housing, roads and water, we were able to reveal the physical, social, and economic potentials for upgradation. The narratives portrayed in this report come from daily individual stories, as well as longer-term collective achievements.

The vision culminated was upgradation through communal and institutional collaboration guided by several principles of community resilience, optimizing on existing symptoms, promoting economic development, and utilizing existing knowledges and skill-sets.

The report then presents strategies aiming at enhancing small-scale community upgrading, and scaling up previous approaches to township and citywide plans. The strategies shared in this report explore different scales and dimensions of the city are based on existing practices. They are: collaborative distribution of water, public network connections, and finally, land leasing. From the model of the savings group as social infrastructure, to collaborative investments in physical infrastructure, settlements as Ward 67 can become sources of contribution to city wide development. Upgrading of infrastructure through communal and institutional collaboration can hence contribute to the recognition of alternative housing processes within informal settlements.



Fig. 0.2 - Community Presentation of Strategies

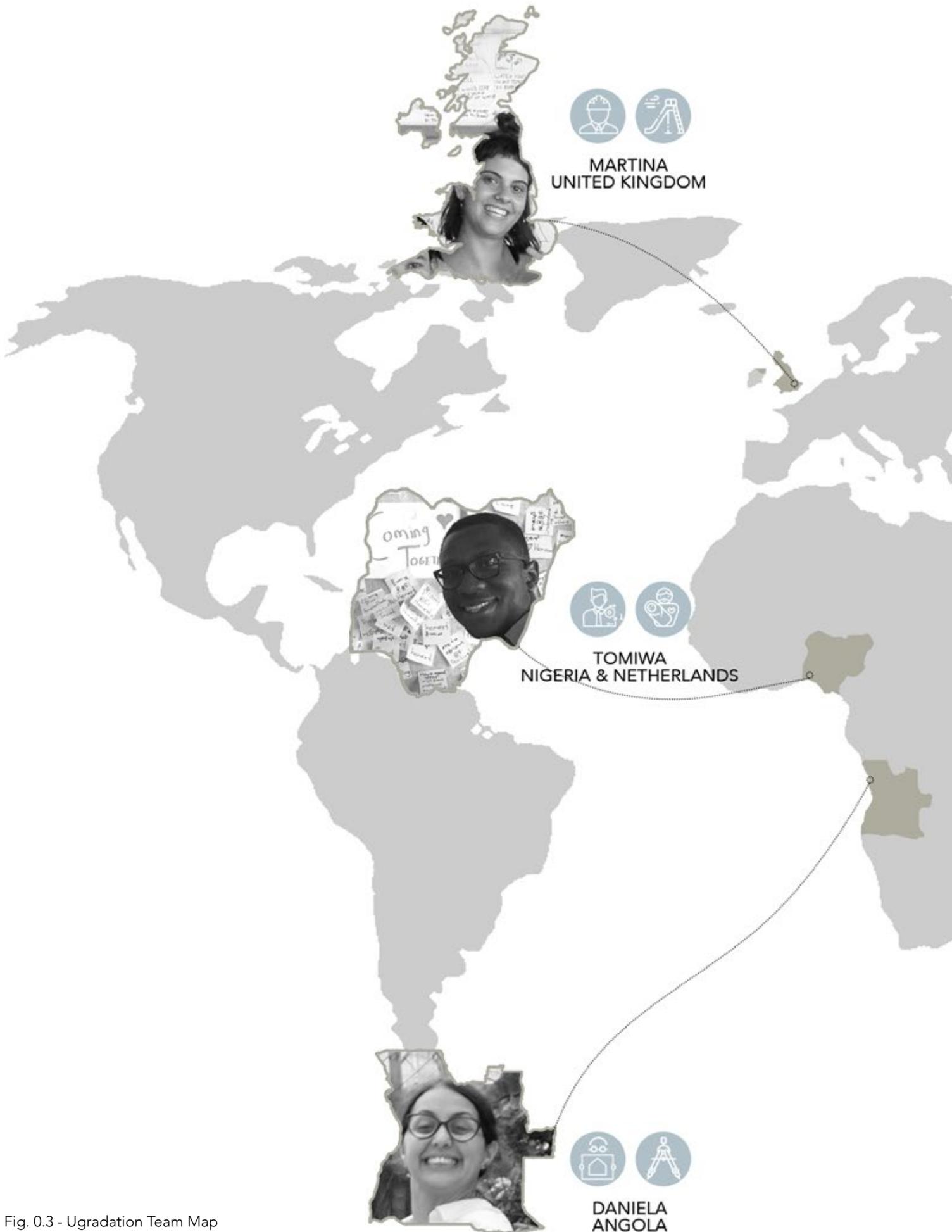


Fig. 0.3 - Ugradation Team Map



EL ANOUD NOUD
JORDAN



LANQING & QIAOCHU
CHINA



0.2 The Upgradation Team



YE MIN THU
HEIN HTET AUNG

MYAT NANDAR KHINE
THIDA SOE SAN
NGU WAH WIN



EAIN T EAIN T
MYANMAR

0.3 List of Acronyms and Abbreviations

ACCA - Asian Coalition for Community Action
 ACHR - Asian Coalition for Housing Rights
 AMA - Association of Myanmar Architects
 Bithukar – Myanmar Community Architects Network
 BSPP - Burma Socialist Programme Party
 BUDD – Building and Urban Design in Development
 CAN - Community Architects Network
 CBM – Central Bank of Myanmar
 CC – Community Centre
 CHDB – Construction and Housing Development Bank
 DEPP – Department of Electric Power and Planning
 DHSHD - Department of Human Settlement and Housing Development
 DPTSC – Department of Electric Power Transmission and System Control
 DUHD - Department of Urban and Housing Development - former DHSHD
 (MOC)
 GAD – General Administration Department (MOHA)
 GOV – Government
 HH - Household
 IDP - Internally Displaced People
 INFRA - Infrastructure
 JICA - Japan International Cooperation Agency
 Kyats– Myanmar Currency
 MOC - Ministry of Construction, Department of Urban and Housing
 Development
 MOEE – Ministry of Electricity and Energy
 MOHA – Ministry of Home Affairs
 MOPF – Ministry of Planning and Finance
 Mit Zu Pala – Funerary Services institution at ward level
 NLD - National League for Democracy
 SG – Savings Groups
 SPDC - State Peace and Development Council
 SLORC - State Law and Order Restoration Council
 UCL – University College London
 W67 – Ward 67 in Yangon
 WFW - Women for the World
 Yami Yapa – informal ward level steering committee
 YCBD - Yangon Central Business District
 YCDC - Yangon City Development Committee
 YESC - Yangon Electricity Supply Corporation
 YHT - Yangon Heritage Trust
 YTU - Yangon Technological University

0.4 Introduction

Framed in the context of Myanmar in a time of transition, our research was guided through three specific modes of transition - the physical, social and economic - with political transition as a cross-cutting concept throughout. This allowed us to better contextualize Yangon's urban transformations in transition'. Looking at the city's growing population and rapid urbanization, we dove deeper into understanding some of the more pressing, consequent issues: the state's ineffective mechanism response to urbanization and the growth of informal settlements in the city. Both recognizing the insufficient model of state-led provision of services, and that alternative housing processes in informal settlements are not acknowledged by the state, it became apparent that looking at Yangon's housing crisis was key to future, multi-scalar upgrading strategies.

This formed the basis of our analytical and theoretical framework, where we looked into how alternative housing processes are being overlooked. Lack of institutional support for existing conditions and recognition of existing processes, highlighted the lack of collaboration needed for upgrading. Understanding living in a collective urban environment as a system supported by diverse networks we realized the role of infrastructure as vital. This consisted of physical, social and economic infrastructures. Reframing formality-informality as non-binary and interconnected processes, we understood this as a major contribution to an overall lack of recognition that affects the marginalized urban population of Yangon. We attempted to unpack the possibilities of a grey area where diverse formal-informal practices can co-exist; a room for manoeuvre. We identified this social and institutional collaboration. From this, we were able to reach our question: How can collaborative upgrading of infrastructure contribute to alternative housing processes?

This was more carefully explored during our fieldwork, where Ward 67 was used as our entry point. While housing was used as the general context, roads were used as a tool to understand current methods of upgrading. Water, a priority highlighted by community members, WFW reports, and our on-site research, was used as our analytical lens in understanding specific infrastructure provision.

From the fieldwork findings, a set of community strategies emerged that aimed at tackling some of the constraints related to water provision and quality at a ward scale. Together with information on citywide plans and government projects, new strategies were developed aiming to scale up previous approaches to a township and citywide plans. The strategies shared in this report are the result of this process as a whole, having explored the different scales and dimensions of the city and taking the existing practices, by many actors at different levels, as a foundation.



Fig. 0.4 - Final Mapping Exercise in Ward 67

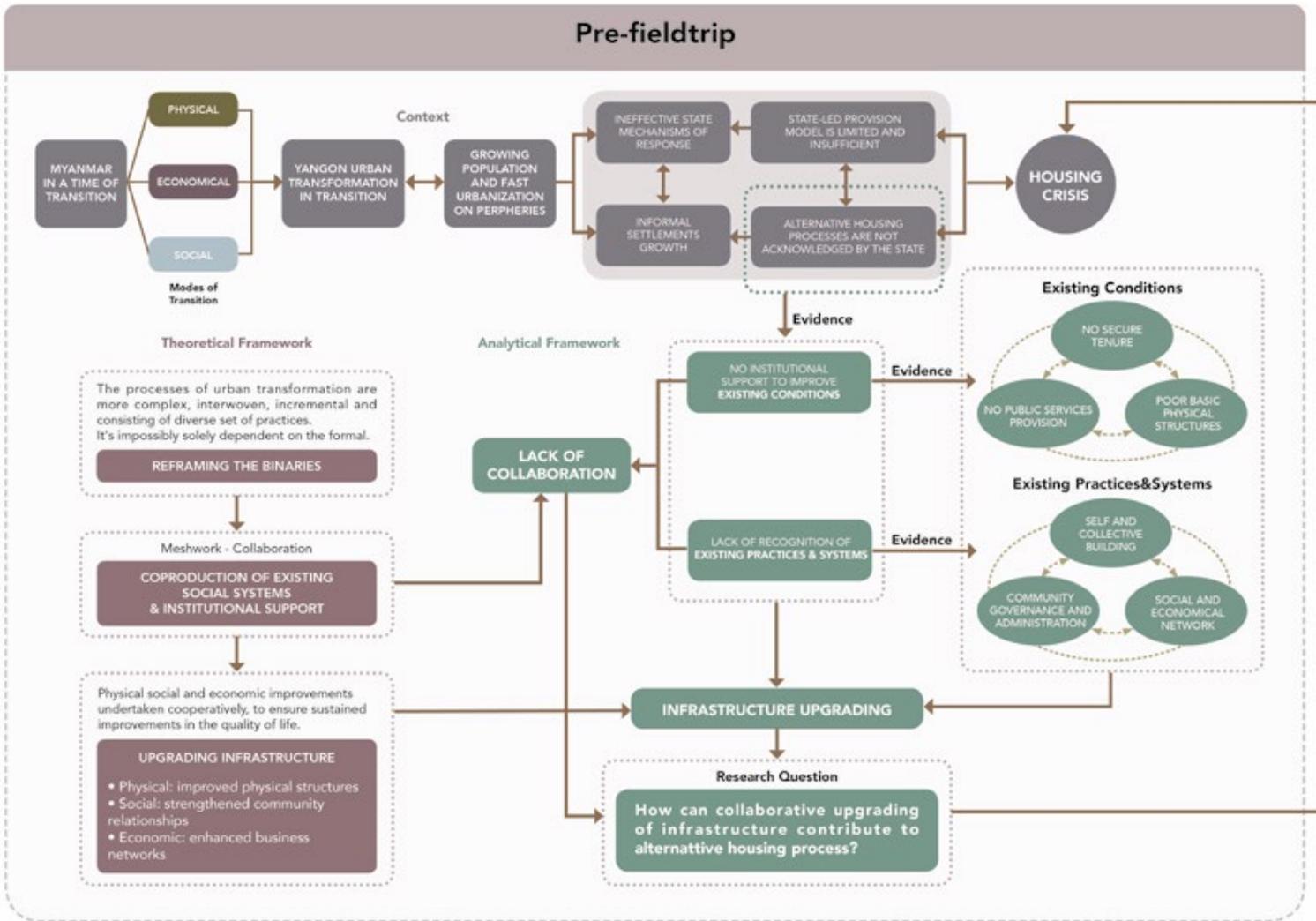


Fig. 0.5 - Process Diagram

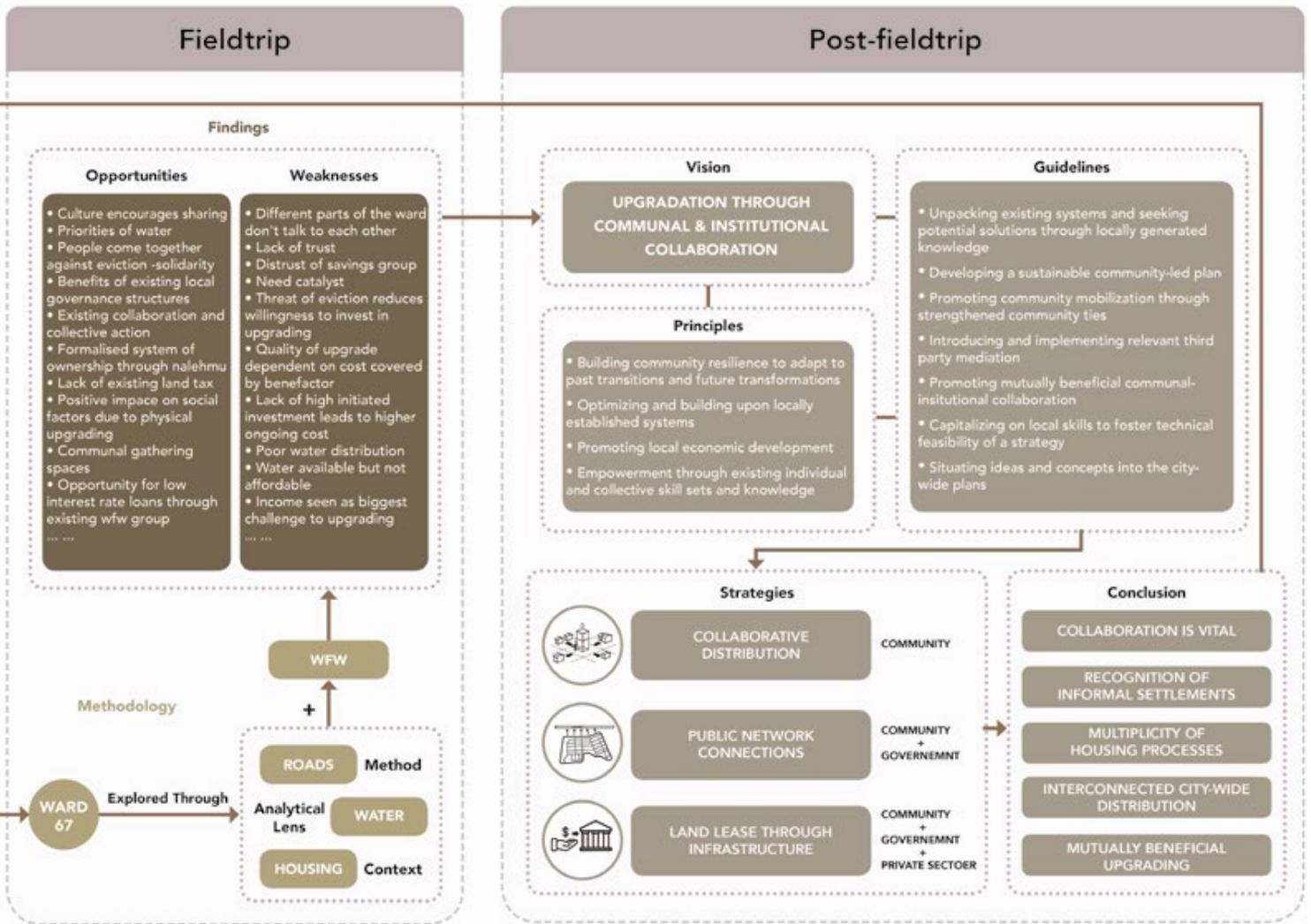




Fig. 0.6 - Yangon Circular Line

0.5 Transformation and Transition

Transformation is the **point** or **period** in time where a subject has reached a new transformative state, evolving into a new form, shape, or identity. This is influenced by elements in its previous state of being, as well as external factors new to its normative state of being.

Transition is a **process** most visible between certain milestones of change. It can be defined as the culmination of all milestones as they occur in time, including the processes between the milestones. Transition is what relates and connects the moments of change together.

Transformation in transition can be defined as a period in which a subject changes from its previous state to a new state whilst constantly being in a transitory process that never culminates into an end state, continuously birthing a new period of transition for another level of transformation. Transformation always takes place in-between periods caused by a series of internal or external events and factors over a period of transition that holds it all together.

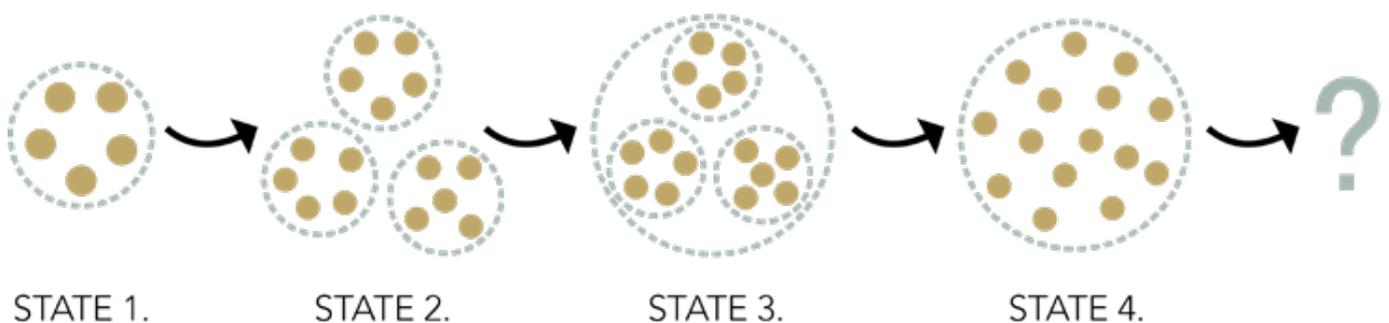


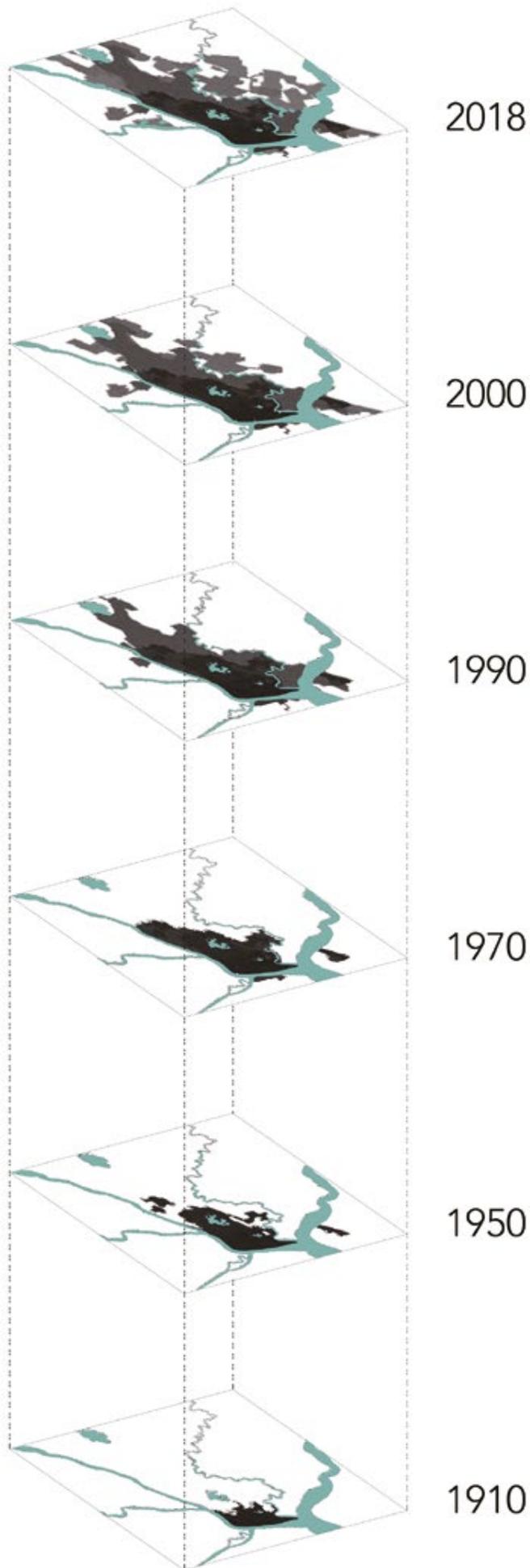
Fig. 0.7 - Transformation in Transition Diagram



Fig. 1.0 - Yangon Train Station Bridge



1.0 Context



1.1 Yangon: Transforming while in Transition

Myanmar has a complex history, characterized by political unrest, and ethnic and armed conflicts. From 1962 to 2011, the country was under a military regime and a socialist single-party governance system. A point of transition began in 2010, when the first multi-party elections took place which helped pave the way for institutional and economic reforms that are still underway. The 2008 Constitution built the foundations for a multi-party political system and market economy. It allowed for the introduction of liberalising reforms such as the privatization of state companies and new foreign investment policies. With a gradually growing economy and efforts to implement reforms towards national reconciliation in an ongoing attempt to solve ethnic conflicts, Yangon continues to transform politically, physically, economically, and socially.

Fig. 1.1 - Yangon Growth Diagram



Fig. 1.2 - Yangon Development



Fig. 1.3 - Urban Peripheries, Limit of Ward 67

1.2 The Urban Peripheries

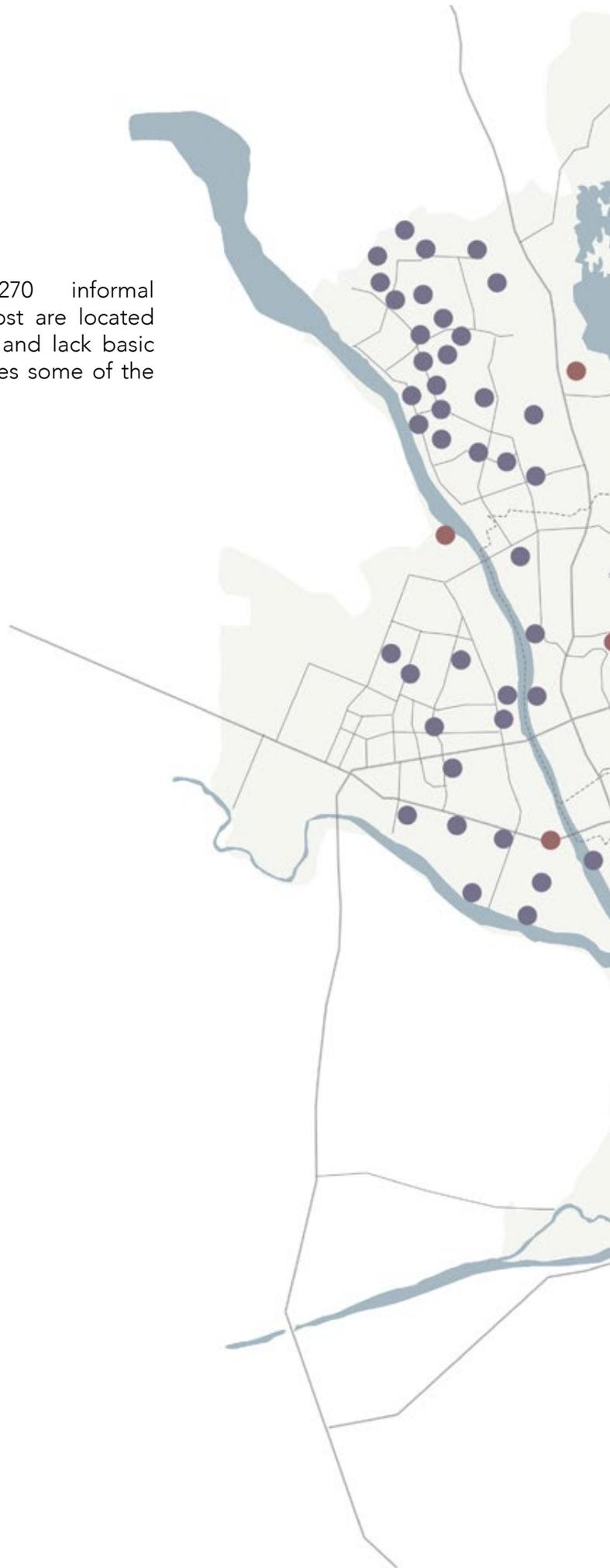
With over five million people, Yangon is the most populated city in Myanmar. The city area covers 33 townships of 4 districts in the Yangon Region and has its own City Development Committee (YCDC). In big cities like Yangon, the peripheral areas around the consolidated centre play an important role in the city's expansion and development. In Yangon, some of these areas were agricultural land far from the centre. As the city developed, however, they became attractive locations for industrial development and an entry way for migrant workers. Historically, rural-urban migration in Myanmar was driven by a series of socioeconomic push and pull factors and had a major role in shaping the main urban centres where gradually new peripheric informal settlements with no service provision started to grow. In Yangon, since the 1950's there were waves of government imposed forced evictions and relocations to new townships or satellite towns in the periphery with no basic infrastructure and services, the growth of these settlements was caused by the increasing flow of people moving in as a result of many factors like Cyclone Nargis that hit the country in 2008, and more recently the rapid economic growth and fast pace industrialization.

Today, Yangon is still a centre for commercial and economic activity attracting migrants looking for jobs. Finding an affordable place to live is challenging, and many new settlements lack basic services and infrastructure. These settlements might include squatters, owners and renters organized in different modalities and the market is supported by a network of informal brokers and local governance. In many cases renters live in insecure conditions, at risk of eviction as the city expands, land speculation rises, and new big scale developments take place in peri-urban areas following new plans.

The government and local and international planners are looking at peripheric areas and townships around the centre to expand the city and create new business districts and industrial zones.

Social enclaves are starting to increase in these areas with informal settlements neighbouring industrial areas, gated communities and high-end condominiums.

Yangon currently has around 270 informal settlements (UN-Habitat, 2017). Most are located around the urban periphery areas and lack basic service provision. This map illustrates some of the settlements identified by WFW.



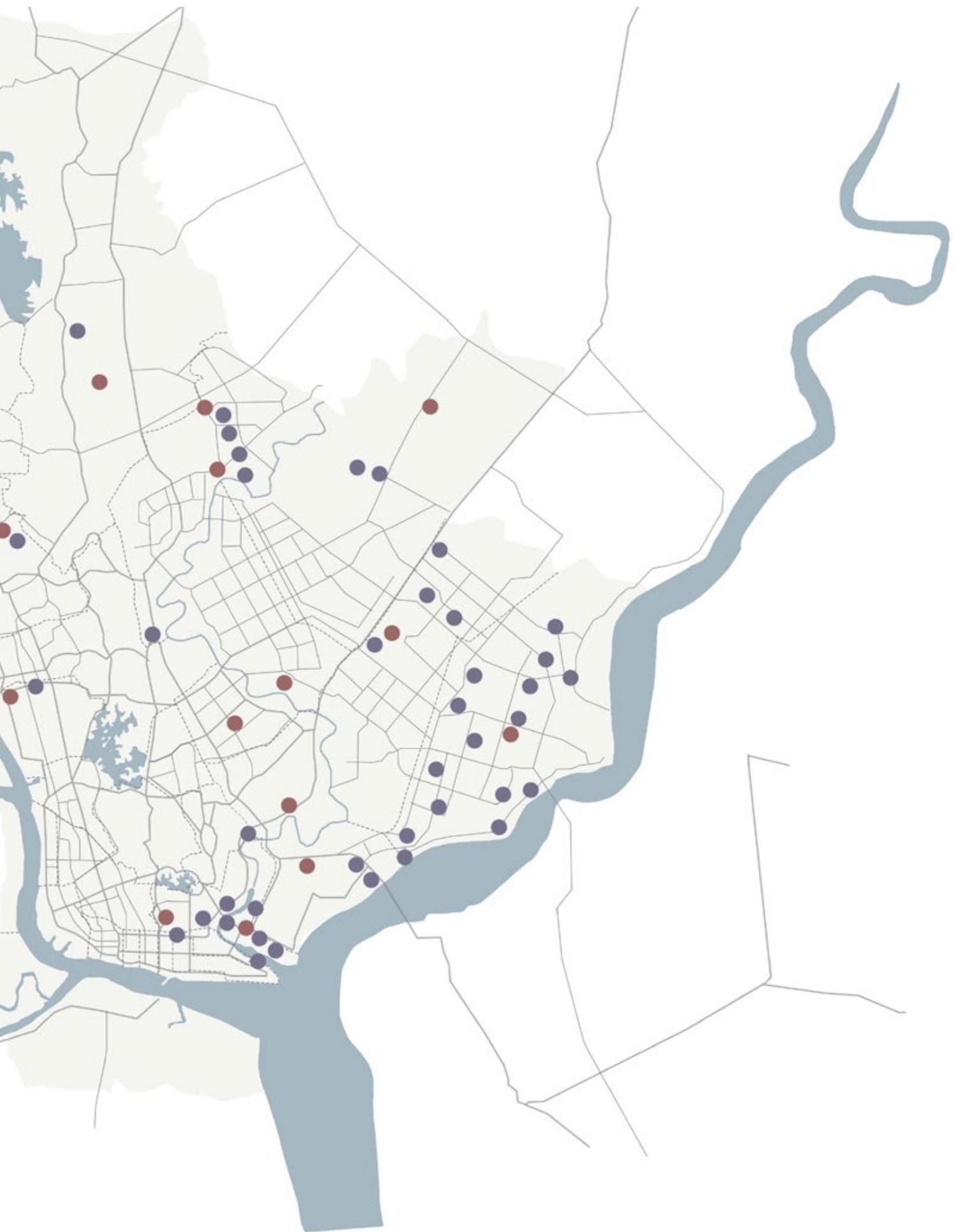


Fig. 1.4 - Map of Yangon Informal Settlements

1.3 Current Challenges And Opportunities

Governance, development, planning and housing

In Myanmar there is no official policy targeting informal settlements and, in many places, people are still living in precarious conditions.

The governance system is complex, not only analysing from a historical perspective, but also looking into the transitional institutional structure changes that are currently in place. Governmental attempts to develop a better city include Urban Development Plans, large infrastructure projects and guidelines and directives for housing provision. Many of the big scale developments and infrastructure plans are supported by foreign investment and planning consultancy and are focused on developing the economy while taking advantage of the country's favourable position in South East Asia. These efforts have been ineffective to the overall lower income population, specifically regarding housing and services provision.

In 2016, the government released its National Economic Policy with 12 steps that included guidelines for more sustainable cities and improvement of public services. MOC and YCDC are working with JICA to develop an Urban Development Plan and a Transportation Plan for Yangon. these plans are unclear as to who they target. Similarly, there is a an ambitious program aiming to develop one million houses by 2030, intentions to establish a National Housing Policy, create a new state Housing Department and develop new legal and financial mechanisms. While in the past the government developed site and service approaches and upgrading strategies, currently, only low-cost and affordable housing are being developed. The housing provision strategies are not effective and there seems to be an absence of representation of some of the existing urban practices and processes.

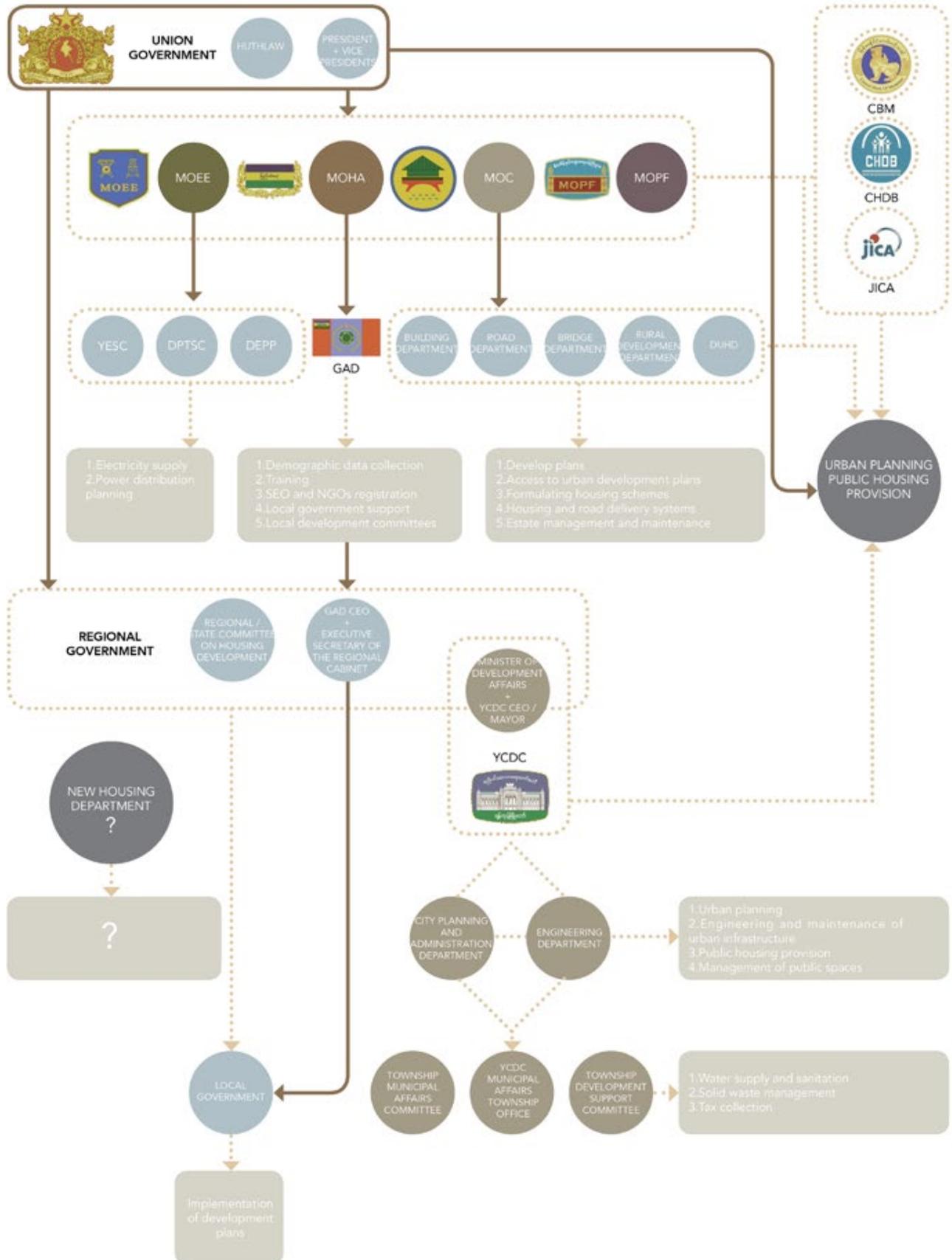


Fig. 1.5 - Governance Structure, Actors Involved in Planning Housing and Infrastructure



Fig. 1.6 - Housing Planning in Yangon Statistics

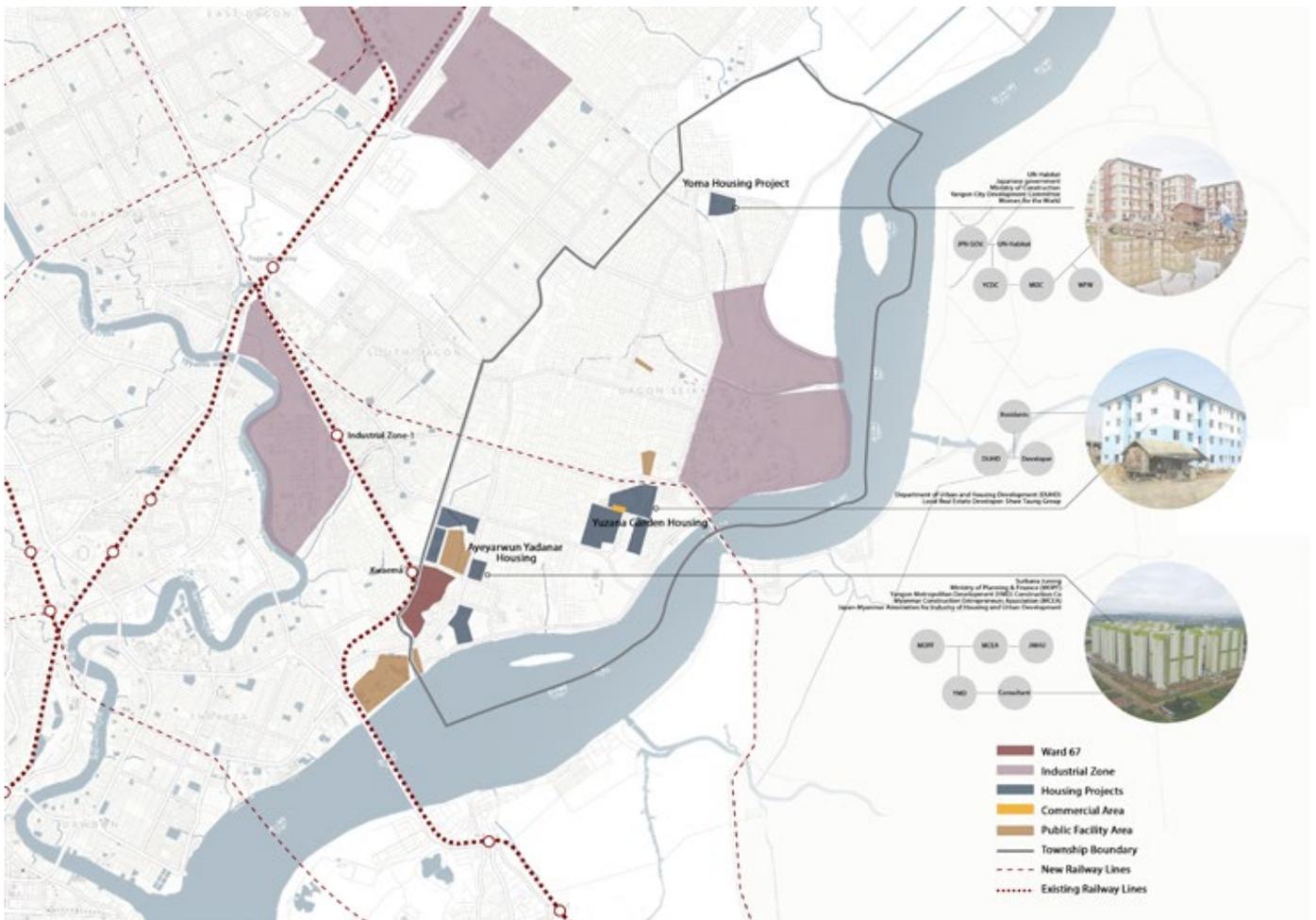


Fig. 1.7 - Location of Housing Developments in Dagon Seikkan



Fig. 1.8 - Yadana Housing Development

1.4 Dagon Seikkan

Townships play an important role in the administrative structure of the country and they can include both urban and rural areas and currently some of the administrative roles are performed by elected members of the community. Dagon Seikkan is included in the new preliminary JICA plans a target area of strategic urban development planning, it is an industrial area along Bago River. In 1991, DHSHD (now DUHD), appropriated the land from farmers. Following that, satellite communities and industries started moving to the area that gradually expanded. Displacement caused by the civil war, natural disasters, rural-urban migration, land redevelopment for industrial purposes and increasing land costs, all contributed to the increase in population and density. Many informal settlements lack adequate drainage systems and are under risk of flooding and eminent eviction as land is mostly owned by state departments. The state values the land as it can be used for industrial expansion and new housing developments as well as to implement key infrastructure and increase the accessibility to the city centre.

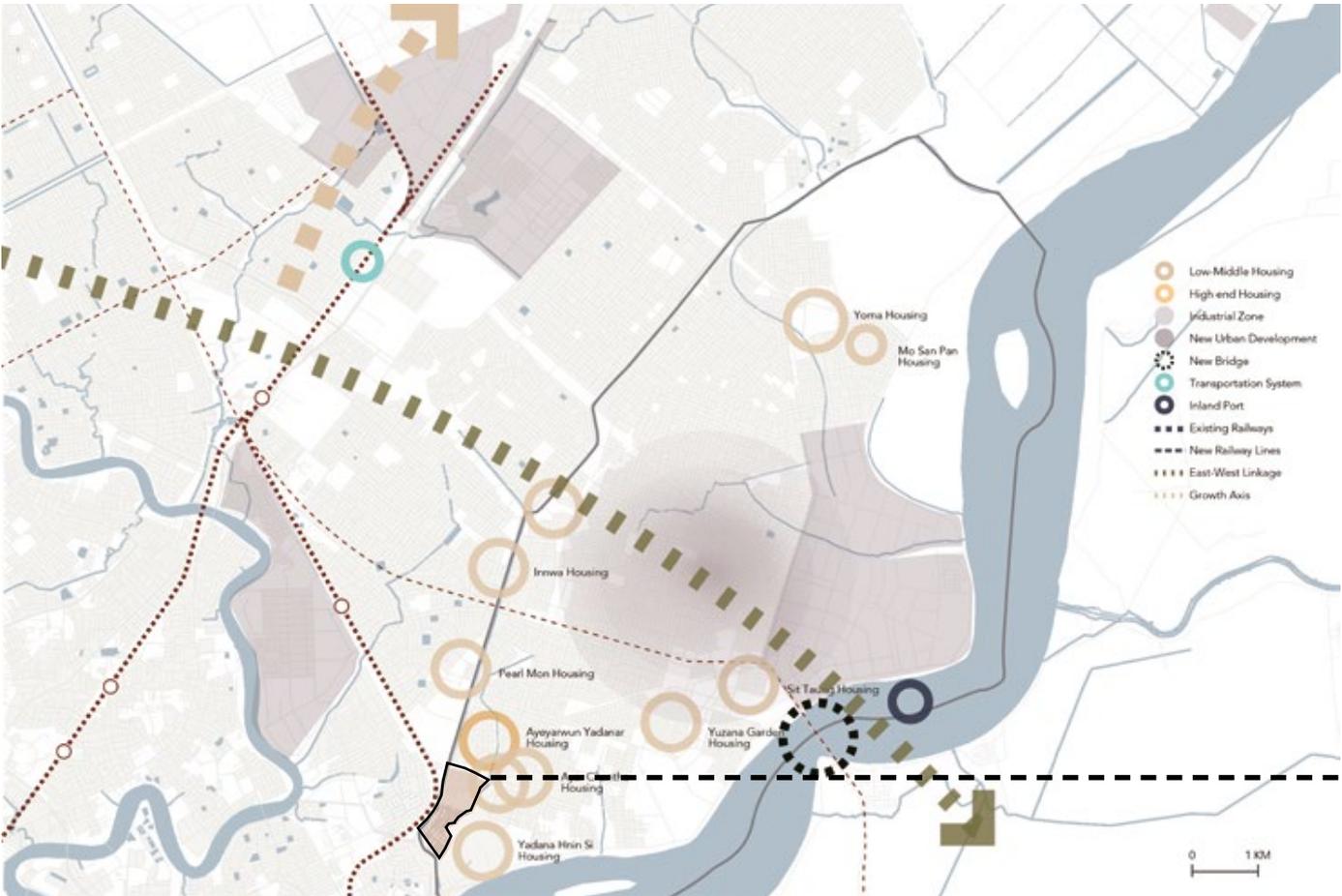


Fig. 1.9 - Planing Visions Based on JICA Plan

1.5 Ward 67

Ward 67 is located in the southwest part of Dagon Seikkan Township and was composed by migrants that arrived mostly as a result of economic pressures or disaster including many that left the Ayeyarwady region after Cyclone Nargis hit in 2008. Many of the first inhabitants were employed in construction projects close to the area and stayed there. The ward faces issues like no sewage systems, no electricity, no water provision or waste management systems. A majority of people in the ward work in informal activities, the most popular being shop keeping, service provision, selling water and electricity, construction work, or driving. With many residents having previously acquired building knowledge and skills, most houses are self-built. Residents have faced eviction notices in the past and the risk is still eminent as the government still labels them as squatters. One of the most important aspirations to them is securing tenure.



Fig. 1.10 - Map of Ward 67



Fig. 2.0 - House in Upgrading in Ward 67



2.0 Theoretical and Analytical Framework

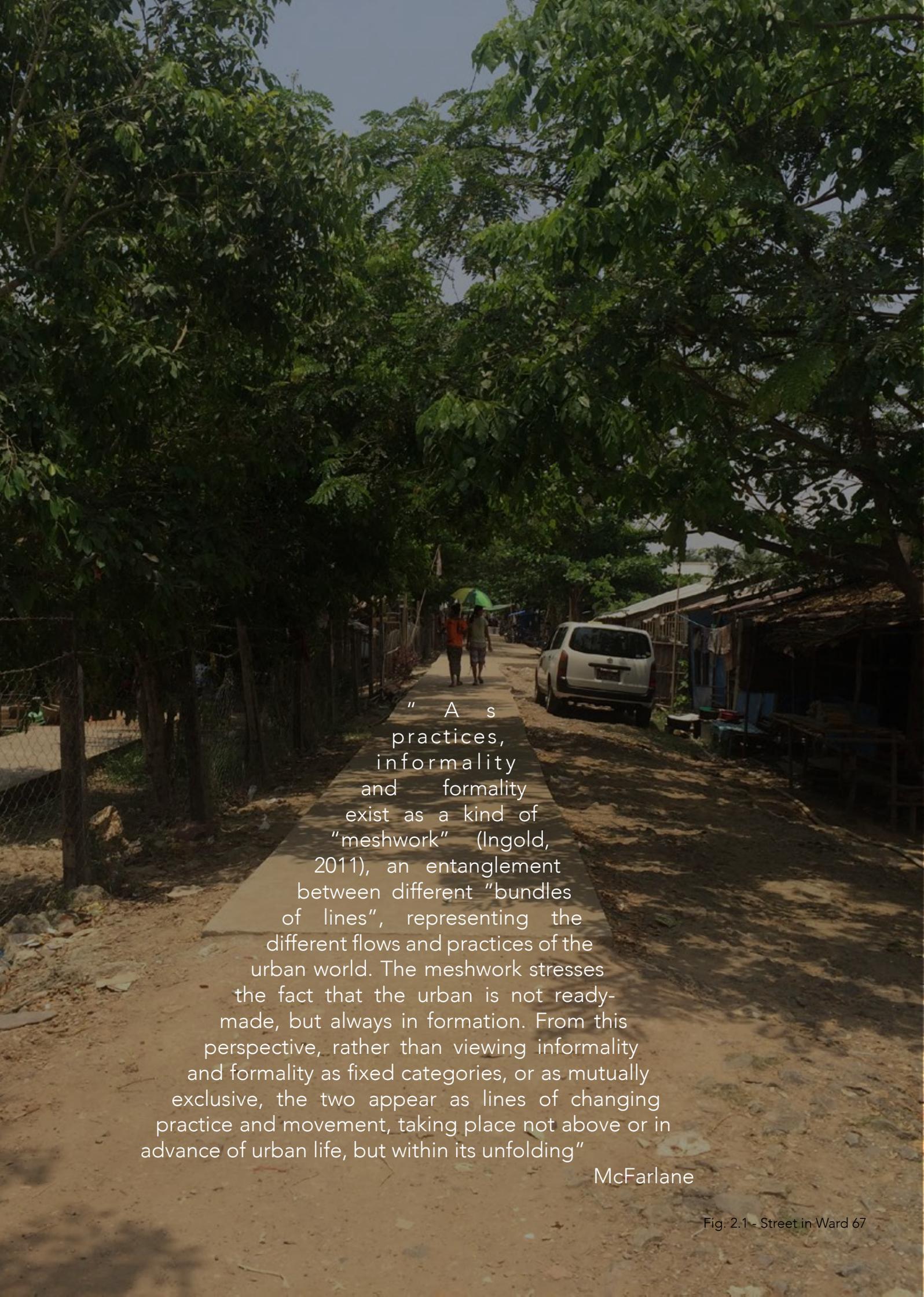
2.1 Theoretical & Analytical Framework

Like most slum settlements worldwide, Ward 67 and similar areas in Yangon are deemed informal, in contrast to their more urban and 'formal' counterparts recognized and supported by institutions and government bodies. It is however, difficult to place these clear boundaries of informal-formal. Based on Colin McFarlane's notions of the 'informal', informality and formality are interconnected practices and process, a "meshwork", rather than existing geographies (McFarlane, 2012). These practices are ongoing and habitual actions within the unfolding of everyday life.

It can be argued that the political, social, and economic transformations and transitions that people experience do not exist only in formalized institutions. They also take place in households, negotiations, concepts of cooperation and understanding, daily practices, conflict and trust. Informality here, is seen as a type of negotiation and valuation, in which informal agreements and forms of valuation/negotiation (what we came to understand as 'Nalehmu' in Burmese) drive urban development and urban life. Informality, therefore is not outside formal systems, but is produced by formal systems and always connected with them. As mentioned in McFarlane's article "Rethinking Informality: Politics, Crisis, and the City":

"Across different cities, and within cities, the informality–formality regime varies. Notions of "formal" and "informal" are rarely neutral, and reflect dominant forms of state, corporate, legal, residential, and activist power, and debates about the sorts of urbanism that should be valued, promoted, avoided, or removed " (McFarlane, 2012).

From research, it is evident that alternative housing processes in **informal settlements are not acknowledged by the state**. Here, housing is looked at as an ongoing activity that penetrates the lives of those who are housed as opposed to a physical commodity that is provided. It concentrates on the role of housing within the context of the household's broader life practices (Turner, 1972). Currently, the state is not providing support to improve existing conditions in the informal settlements as they lack basic services and physical infrastructure. This is perpetuated by the continuous cycle of precarious living conditions: no tenure security, poor basic physical structures, and public service provision continue to reinforce each other driving a wider gap between informal settlements and the potential for institutional support. Simultaneously, there is a **lack of recognition** for some of the existing social practices and systems such as self and collective building, the presence of social and economic networks, and community governance administration.

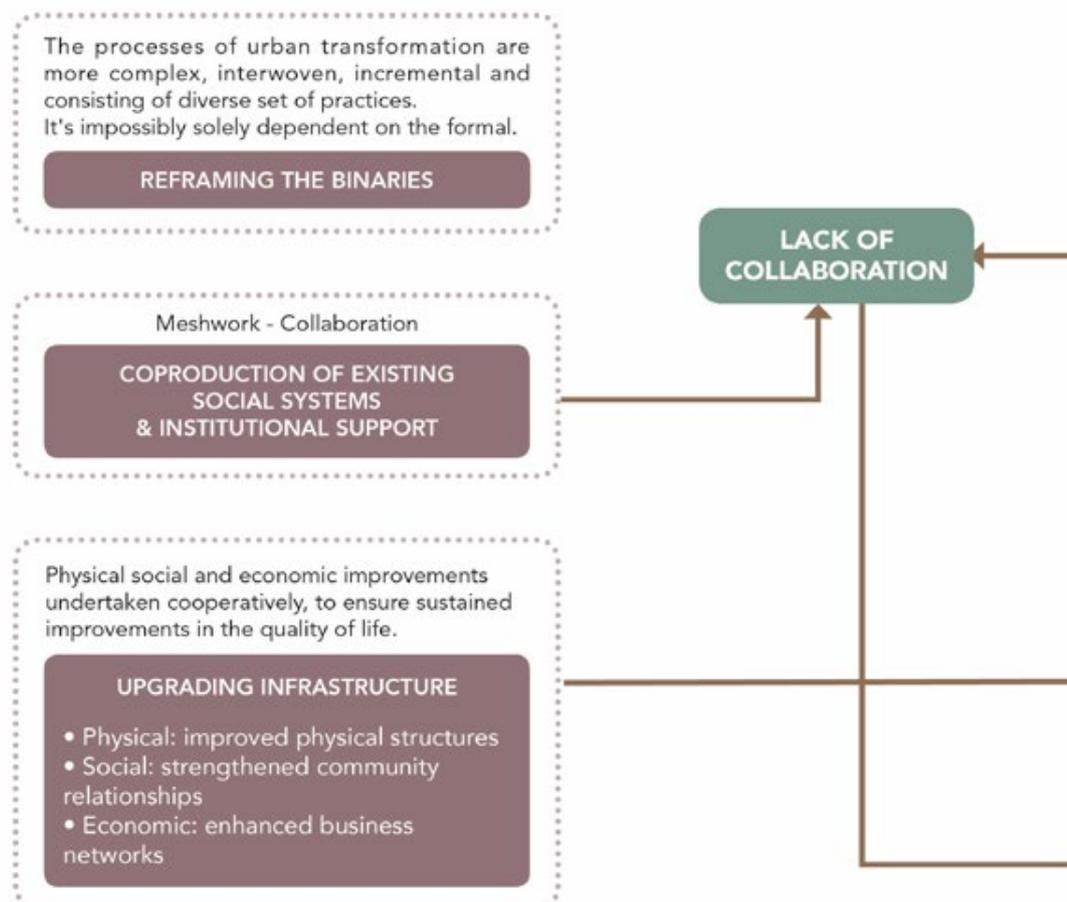


" As practices, informality and formality exist as a kind of "meshwork" (Ingold, 2011), an entanglement between different "bundles of lines", representing the different flows and practices of the urban world. The meshwork stresses the fact that the urban is not ready-made, but always in formation. From this perspective, rather than viewing informality and formality as fixed categories, or as mutually exclusive, the two appear as lines of changing practice and movement, taking place not above or in advance of urban life, but within its unfolding"

McFarlane

These socio-economic practices can be seen as unrecognised strengths that can be used as assets for upgrading existing physical structures, granted there is a form of social and institutional collaboration. Here, collaboration refers to the process of working together towards a common goal through fair and equitable relations. Two conclusions can be drawn from this analysis: there is a **lack of collaboration** between the state and the community within existing housing processes, and that there is **need for infrastructure upgrading**. This said, How can collaborative upgrading of infrastructure contribute to alternative housing processes?

Based on our notions of informality, our focus is on the room for manoeuvre between informality and formality. This is not to say that upgrading takes place in the gap between the formal and informal, but rather through collaborations within an informalized co-production of space.



Theoretical Framework

We define upgrading as the physical social and economic organizational and environmental improvements undertaken cooperatively among citizens community groups businesses and local authorities to ensure sustained improvements in the quality of life for individuals and the collective. Hence, our notion of infrastructure extends beyond physical, and includes what Abdoumalique Simone referred to as “people as infrastructure”. To us, infrastructure includes the economic collaboration among residents in urban life and their ability to engage complex combinations of objects, spaces, persons, and practices (Simone, 2004). Using this notion of infrastructure, upgradation strategies would ideally include locally-based interventions that can be scaled up by strengthening collaborative systems on a wider scale. Ideally, this would include collaboration in a mutually-beneficial manner, informing the “meshwork” between the formal and informal.

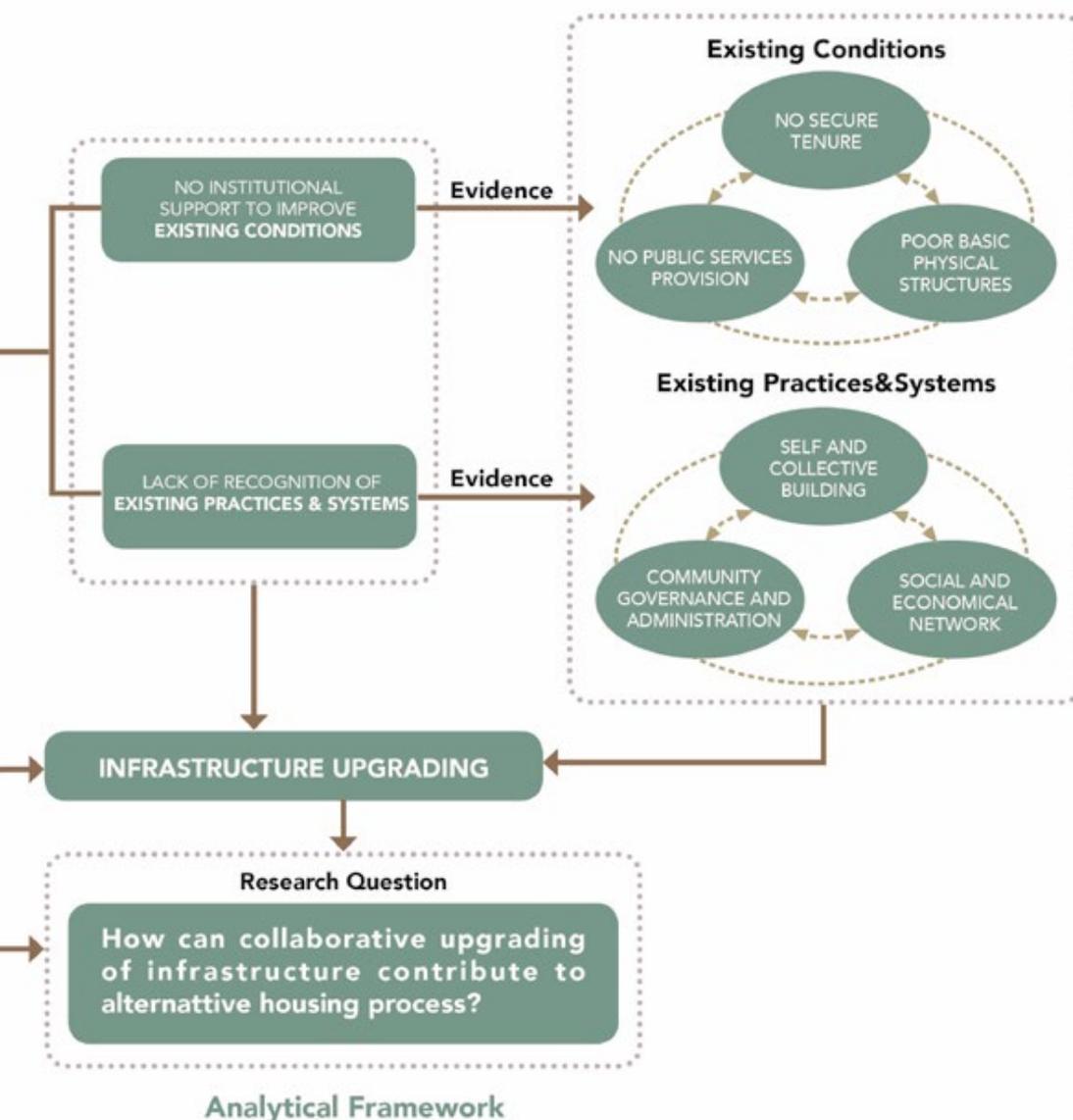


Fig. 2.2 - Diagram of Theoretical and Analytical Framework



Fig. 3.0 - Group of Children in Ward 67



3.0 Fieldwork



Fig. 3.1 - Map of Ward 67 Showing Areas Researched in More Detail

3.1 Fieldwork - Introduction

The majority of the research stage of the trip was spent working with community members of Ward 67 in the Dagon Seikkan Township. The members of the community we were working with were invited to participate by WFW, with whom they have been creating a women's saving group for approximately 2 years. Only three out of the six individuals working with us were part of the savings group. The group included only 2 men, both of whom play an important role within the community in terms of water distribution and infrastructure upgrading.

Based on initial conversations with community members in Ward 67 we focused our main research on two areas of the ward: where our the majority of our group members lived, and the area deemed to be most at risk and in worst condition (See map 3.1 opposite). Through discussions in these two areas, though limited, we also gained an understanding of networks and infrastructure across the ward.



Fig. 3.2 - Illustration Ward 67

DEAS

WATER / QUANTITY

WATER INFRASTRUCTURE AFFECTS HOUSE

Section of House
Leaked Sink

Process

Road plan

Issues

Action on roads

Send a group of

relationship

Collecting action

Areas with high

rent

Issue - actually their

relationship

Wants also affects

Time

It's currently too big

for him to deal

Needs to incremental

Small money

Immediate result

Also in charge

Security

Issues

Waste water

could be used

for toilets

can private pump

Issues

Waste water

could be used

for toilets

can private pump

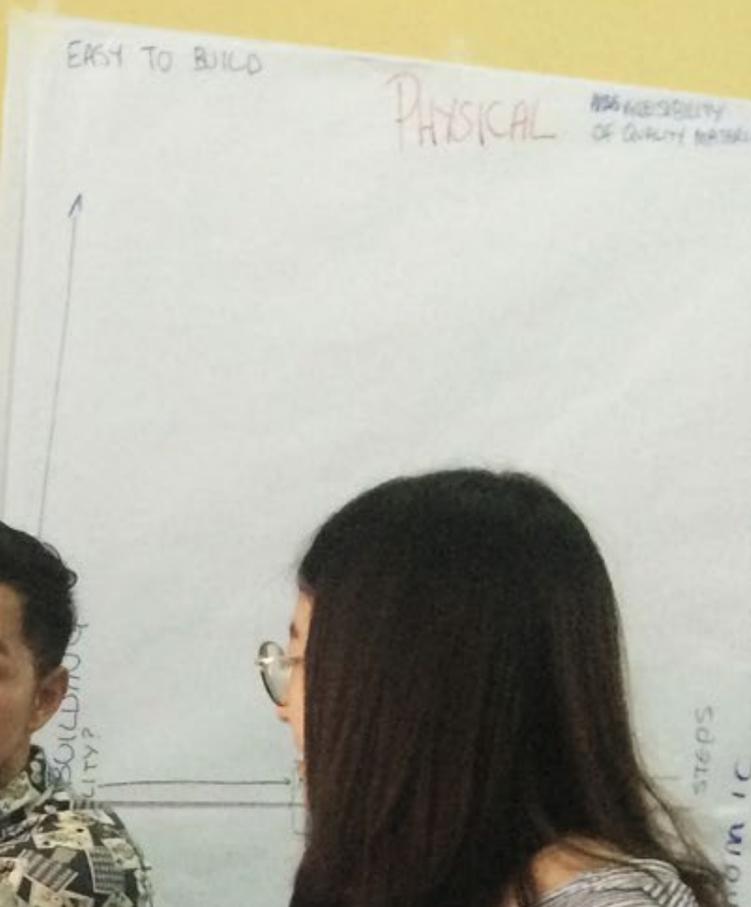


Fig. 3.3 - Students Working Together

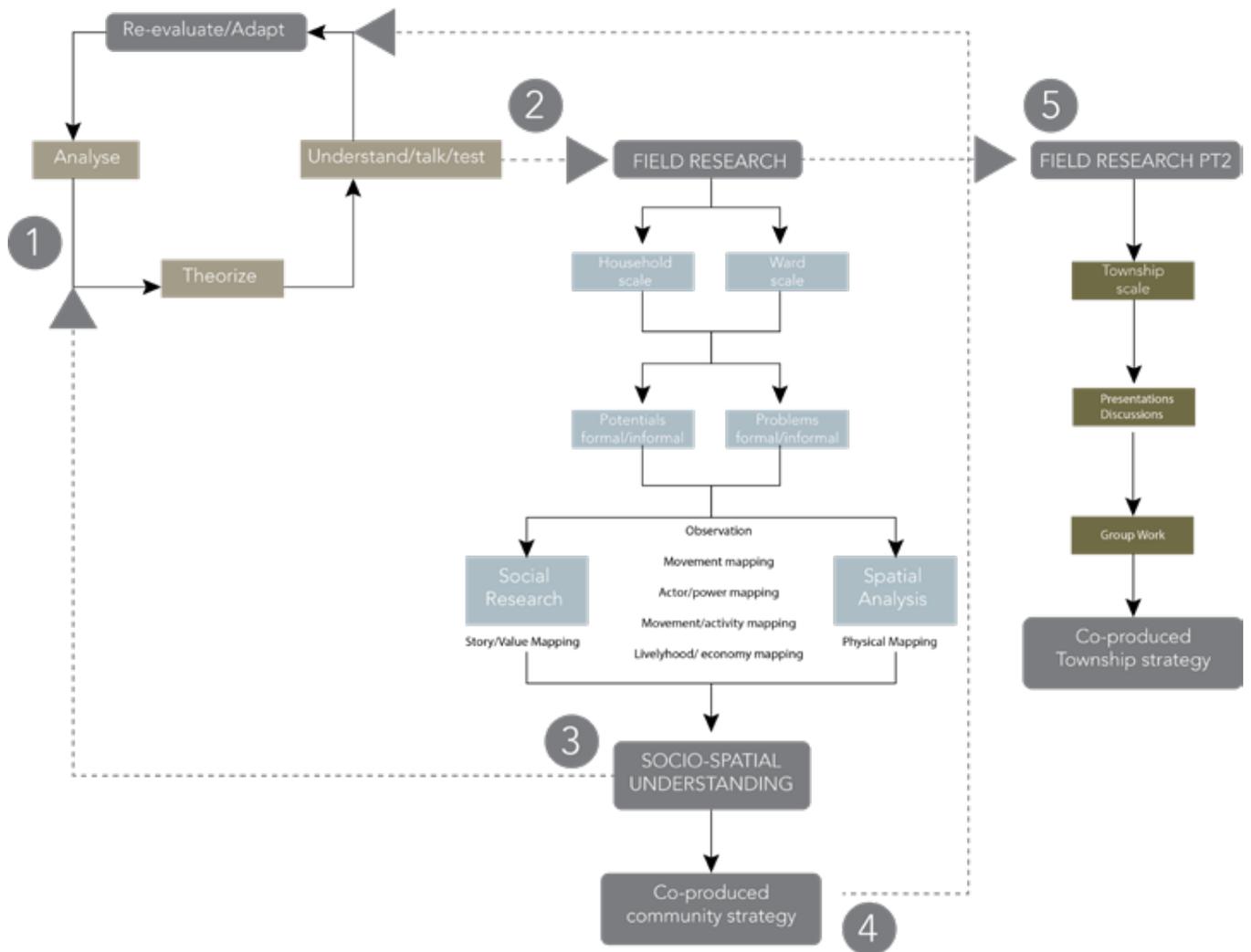


Fig. 3.4 - Diagram of Plan of Action

3.2 Plan of Action

This plan developed throughout our fieldwork as we re-evaluated our methodology to adapt to the new knowledge and direction emerging throughout our work with local students and community members.

One key aspect of our research approach was the need for circular knowledge production, in which at each stage of new information we re-evaluates and adapts our approach based on new understandings.

3.3 Methodology

While working in Ward 67, we adapted our research focus based on the priorities of the community, resulting in us looking at three main themes within 'Infrastructure Upgrading':

- Housing -

Used to explore Context

- Roads -

Used to explore methods of upgrading

- Water -

Used as an analytical lens to understand existing infrastructure provision

Diagram 3.5 shows how these three themes were explored through physical, social and economic factors, in relation to our definition of infrastructure. It also shows the different methods used to explore each theme.

Existing collaborative systems set up by WFW were looked at as a model of how 'Collaborative Upgrading of Infrastructure' could work.

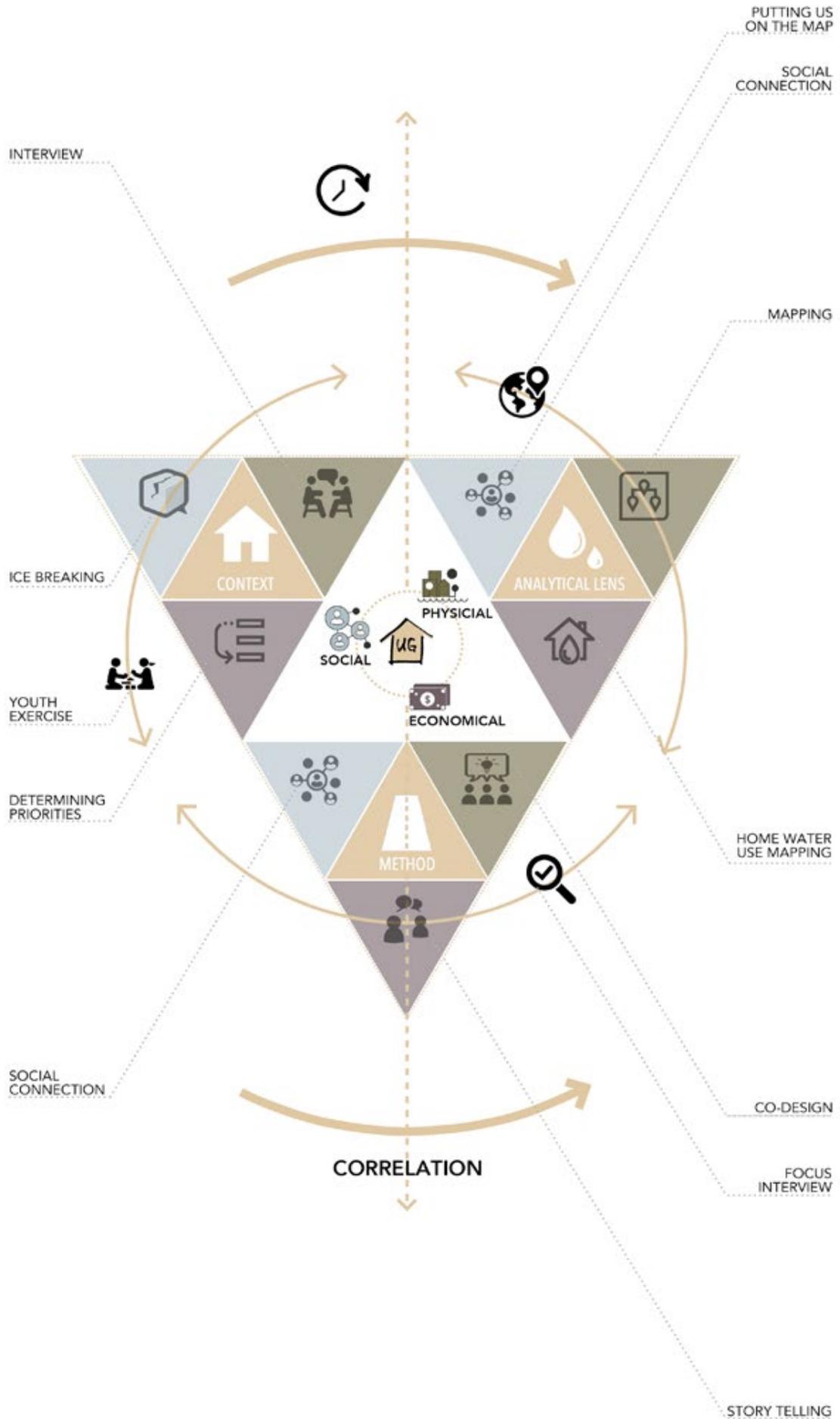


Fig. 3.5 - Diagram of Methodology

3.4 Methods of Engagement

The initial site visit to Pyit Taing Taung housing project gave us a useful opportunity to test some of our methods with participants who were more familiar with this kind of interaction, and allowed us to explore the methods used by the local students and WFW. It was important at this stage to align our objectives for our research with those of our partners.



Fig. 3.6 - Day of Activities in Ward 67

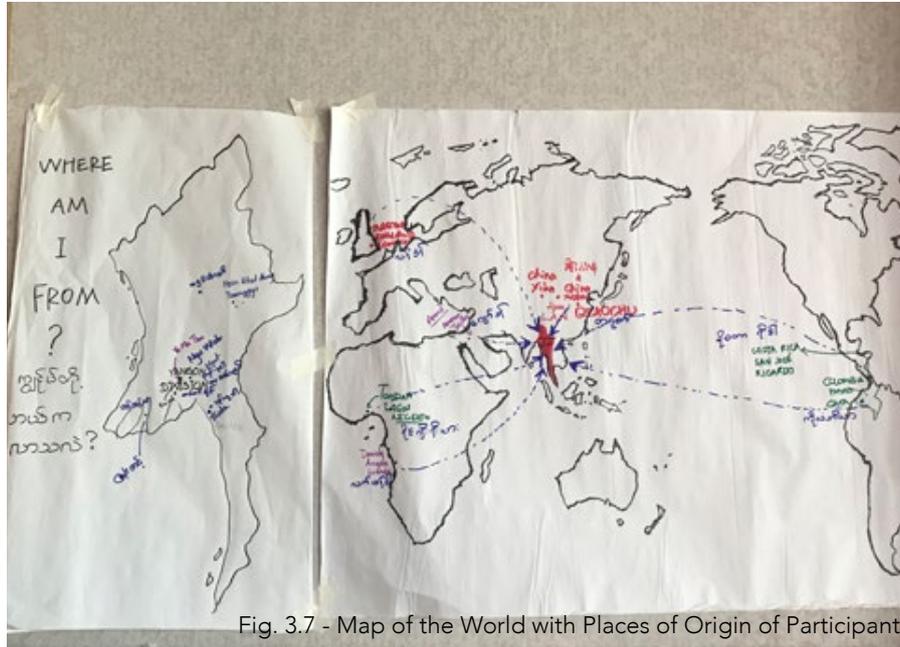


Fig. 3.7 - Map of the World with Places of Origin of Participants

Putting 'Us' on the map

Locating ourselves alongside community members on a world map, and showing the cities we all come from and how we ended up in Yangon, helped us create familiarity and trust. Sharing our stories meant others in the group were more likely to open up and share theirs. It also gave us contextual information about where the community members previously lived, how they came to Ward 67, and where in the ward they lived.



Fig. 3.8 - Mobility Mapping Exercise



Fig. 3.9 - Determining Priorities

Determining Priorities

In order to decide which specific issues within infrastructure upgrading we should focus on we, wrote a collective list of the most pressing concerns. From this list the community members each voted on their top three and the two areas with the most votes became our focus. The two topics chosen were Water and Housing.



Fig. 3.10 - Home Water Use Sections

Home Water Use Map

One activity that enabled us to gain an insight into personal water use was to draw and map water usage within the home. This exercise looked at flows within the home for all types of water, including: Rain water, grey water, washing water, drinking water etc. The main aim was to understand the connections between water use, physical infrastructure and economic impact per household of water use.



Fig. 3.11 - Social Connection Board

Social Connection exploration

In order to get a conversation flowing, this exercise started off with both community members and students listing qualities they look for in a friend. From the ensuing conversation, one common struggle the community members had shared was the difficulty in making close friends they could rely on when they first settled into the Ward. This paved way for the main part of the exercise which looked into the spaces where members of the community came together, or rather, where social networks form. Through conversation and storytelling, we were able to understand the spatial assets and potentials to enhance social networks within the Ward.

Mobility Mapping & Story Telling

In order to understand how physical and social infrastructure affected residents in their day to day lives we worked with them to map daily activities. This included less tangible information such as social gathering spaces and activities that brought the community together, alongside more physical information such as water points and the shops they buy housing materials from.



Fig. 3.12 - Fence Line at the Limit of Property near Ward 67

3.5 Limitations

The methods used enabled us to gather varied types of data, however, due to restrictions in both time and access, the data collected is specific only to a few cases. Although we feel they are representative of many, generalisation is still speculative.

One limitation was the lack of diversity within the community members we worked with. Although not all were savings group members, all had prior positive and negative bias towards the model. Alongside this the majority were mothers over 30, which gave a specific focus on childcare and education, a priority not mentioned by the men.

In addition, the majority of the community members we worked with were from the wealthier, north-east, part of the ward. In order to gain a balanced understanding we also wanted to engage with people from the areas in worse condition, whom our community members admitted they did not talk to. This meant we had to adjust our methods and conduct separate interviews with other community members, to avoid getting biased answers based on their presence.

3.6 Our Positionality

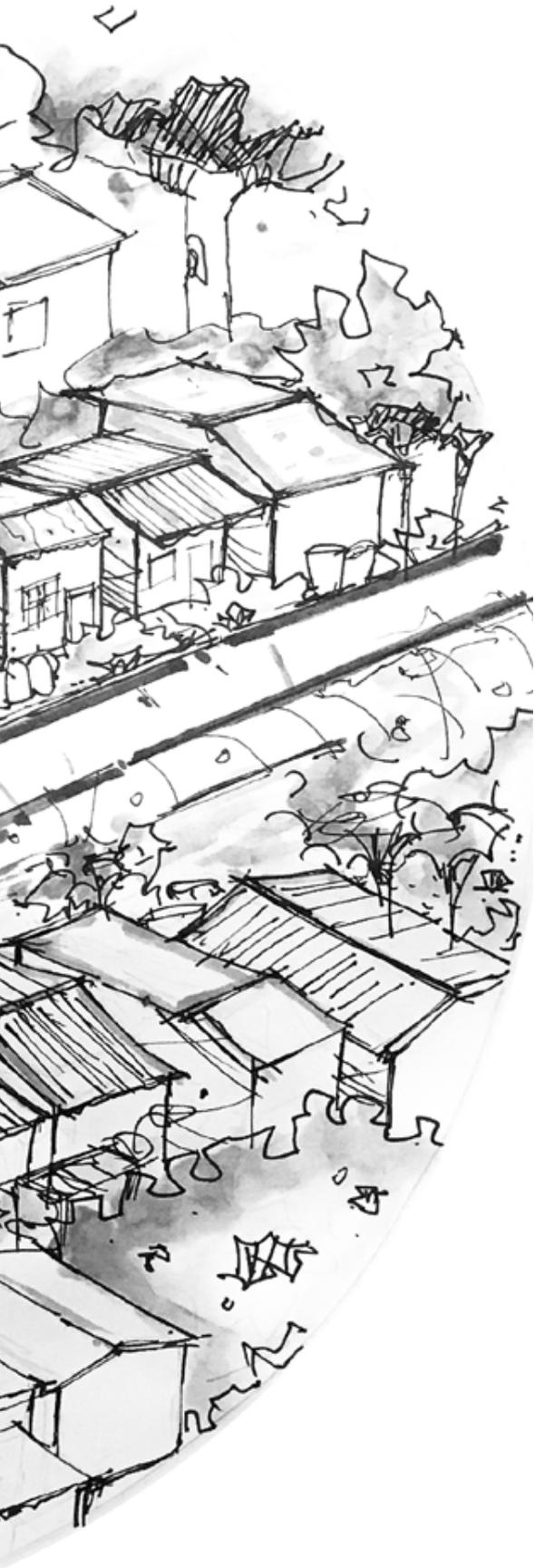
Being mindful of our positionality, we were cautious in the participatory methods and tools we chose to approach our work, adding responsibility accountability and acknowledged subjectivity and hence more ethical terms of engagement. Before approaching the strategies, we acknowledged our position of privilege and agency within our partners and the community in Ward 67, and hence the extent of our role and abilities while devising strategies. Taking advantage of our different backgrounds, we were able to continuously negotiate and understand different viewpoints, using conflicting ideas to produce creative ways of moving forward. Moreover, we ensured that the strategies we devised were informed by two particular things; building upon local knowledge and existing practices, and building on our own educational background and professional expertise. As our group consists of diverse backgrounds in community architecture, engineering, and water resource management, we strived to keep our strategies relevant to the areas that we felt we could most effectively contribute.



Fig. 3.13 - Transect Walk



Fig. 4.0 - Ward 67 Illustration - Community Centre and Well



4.0 Field Findings

4.1 Women for the World in Ward 67

WFW in Ward 67:

Since 2015, WFW have been working in Ward 67 alongside community members. In that time, they have set up saving groups with over 30 members. These savings groups have been successful in improving financial security amongst its members. This year, a community centre was built using their savings, providing a safe and comfortable space for their weekly meetings and gatherings.

Other Social support systems:

The saving groups are among various other institutions within the ward which support the social infrastructure within the community, like the funeral services and the monastery. The funeral services play an important role in the community providing support and mobilizing volunteers.

For more social findings, see Appendix 8.9, p.138-141

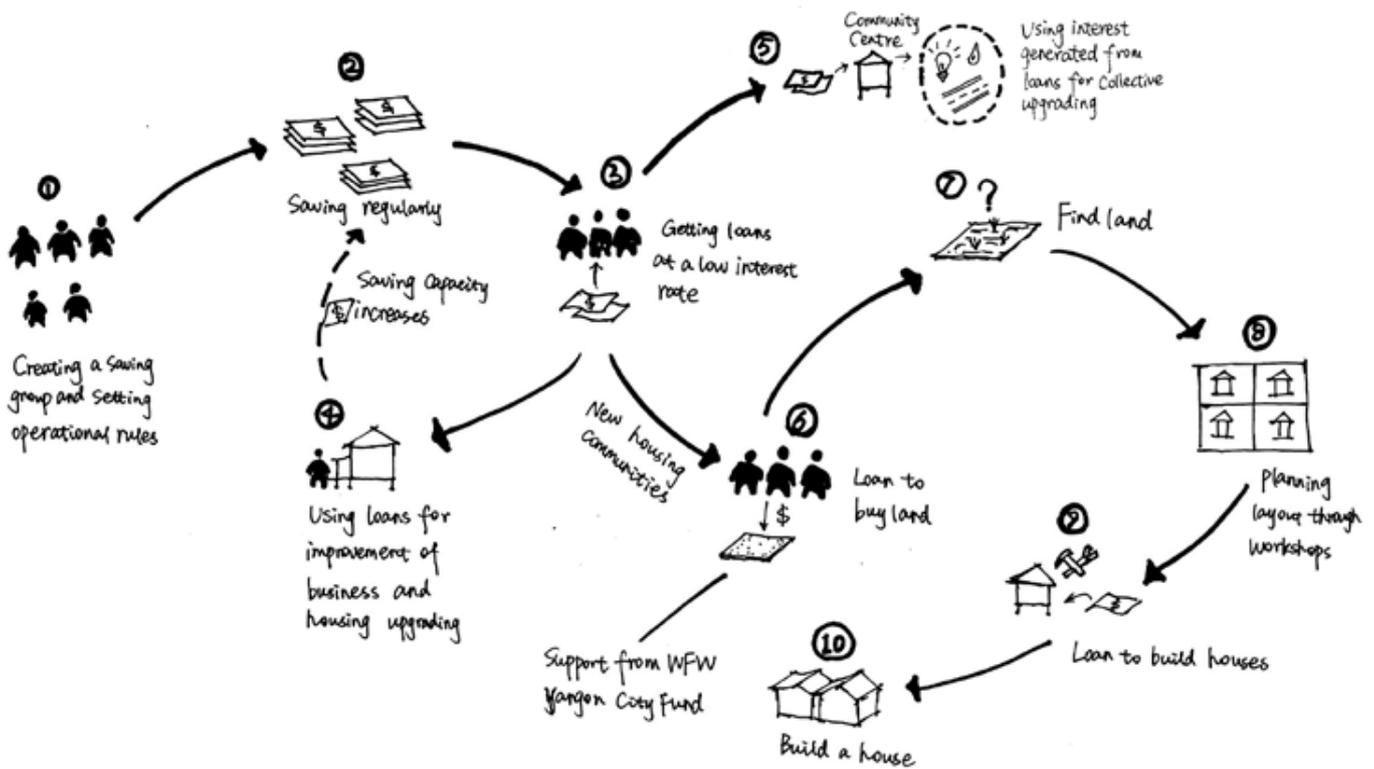


Fig. 4.1a - Savings group process

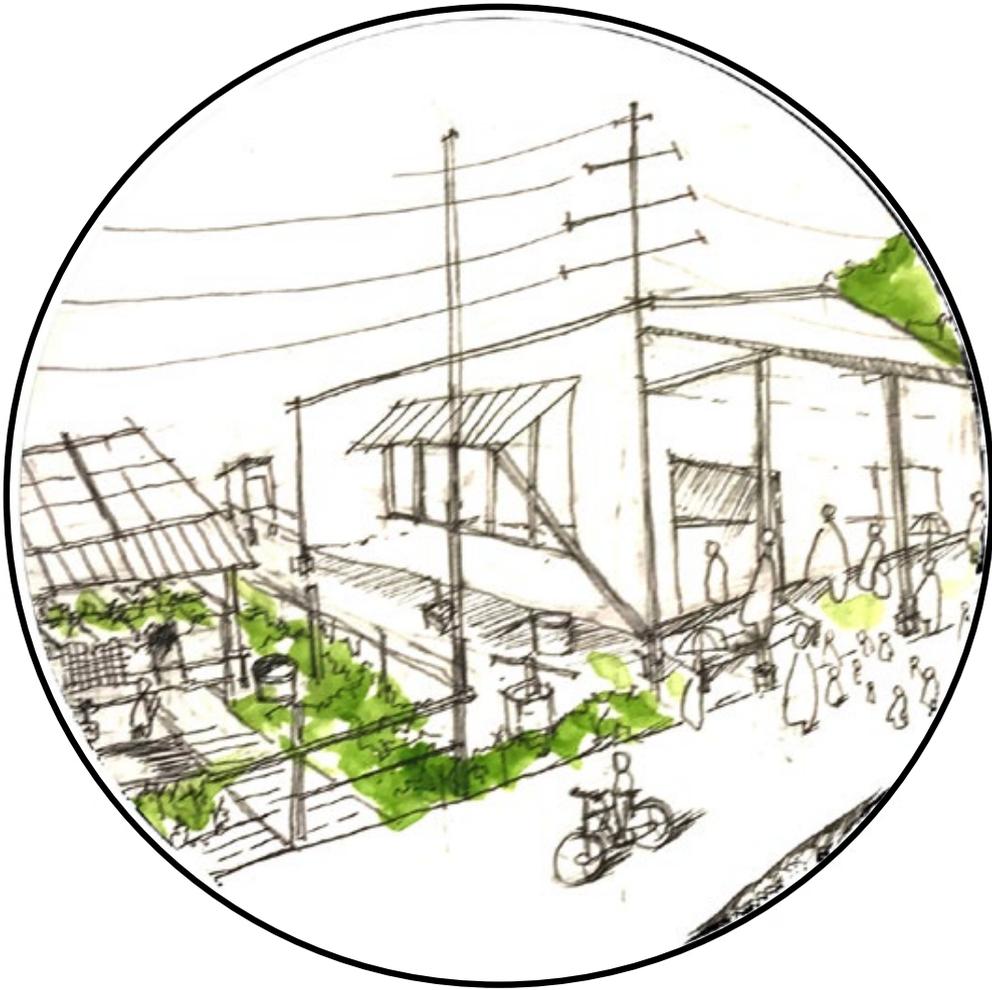


Fig. 4.1b - Community Centre in Ward 67

WOMEN FOR THE WORLD

Weaknesses

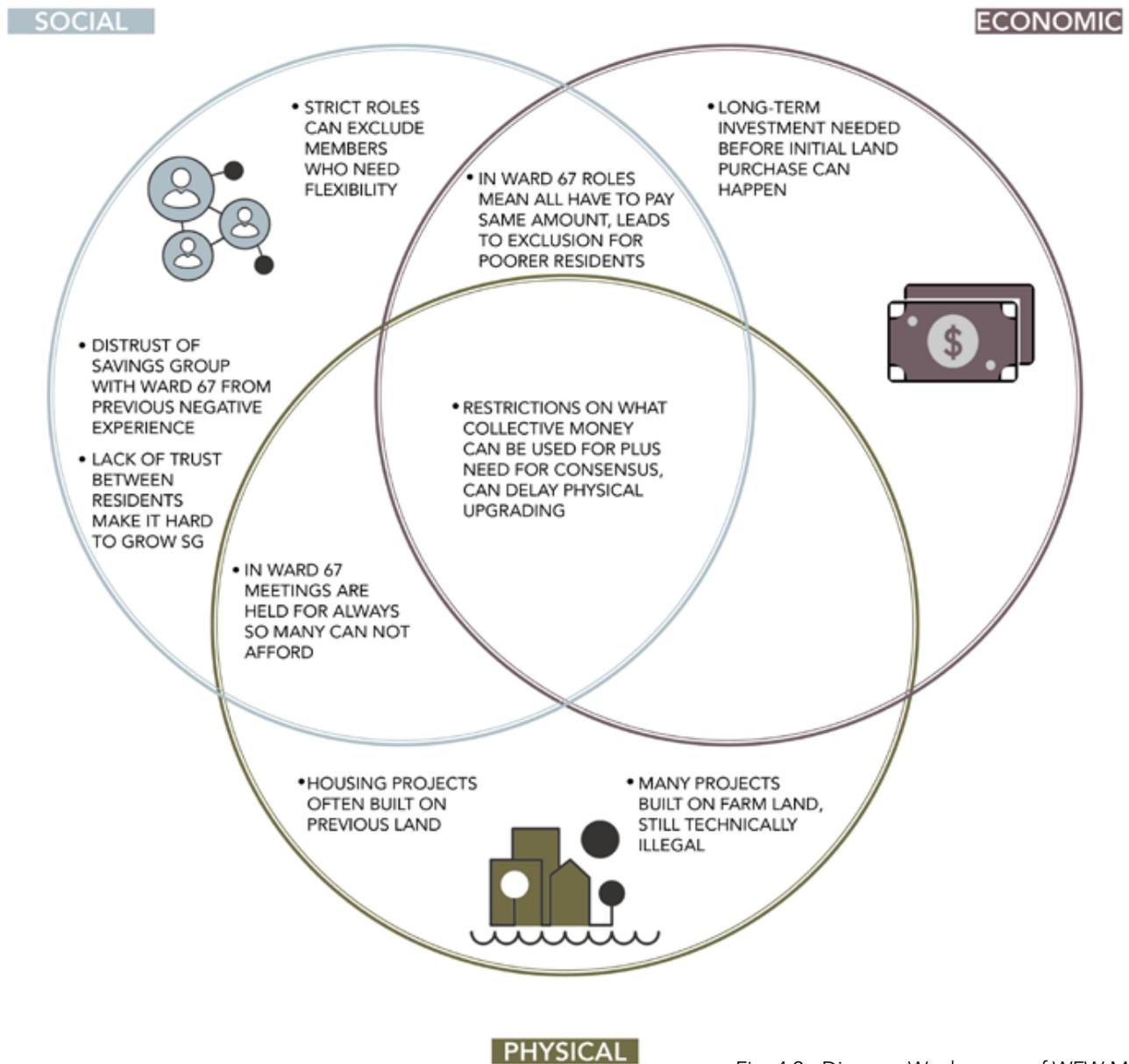


Fig. 4.2 - Diagram Weaknesses of WFW Model

COLLABORATIVE MODEL

Opportunities

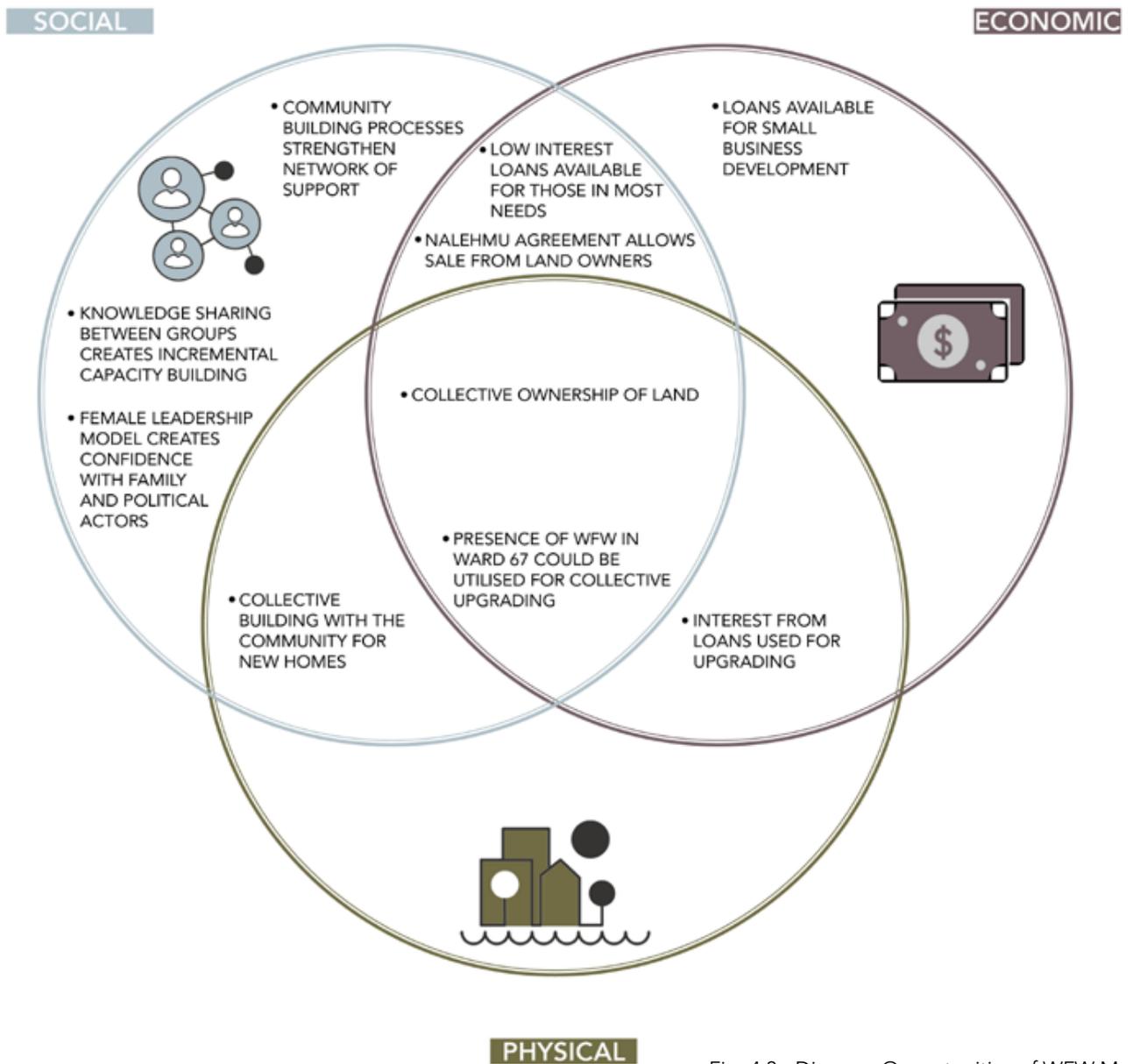


Fig. 4.3 - Diagram Opportunities of WFW Model



Fig. 4.4 - House in Ward 67 Example



Fig. 4.5 - House in Ward 67 Example

4.2 Housing as Context

Our previous understanding of housing as a process was made evident on the ground in Ward 67. The typologies and the state of the homes were incrementally built and inhabited simultaneously whilst pursuing relationships for social infrastructure and physical infrastructures like water, electricity, and waste disposal, showing housing as multidimensional, consisting of much more than the physical structure of a 'house'.

Many people interviewed who had upgraded their houses explained that they saved half of the money needed and took a high interest (20%) loan to pay for this rest. This was often a full process of around 10 years; half spent saving and half repaying the loan. Many residents are not willing to personally invest in upgrading because of the threat of eviction, however some are willing to invest in their houses for improved quality of life and because they feel it could in fact reduce the threat of eviction.



Fig. 4.6 - Sketch of House in Ward 67





Fig. 4.7 - Houses in Ward 67 Examples

Daw Tin's Story

**Bamboe Structure without
water facility
@ Chindwin Street, Ward 67**

**Wife & Mother | Husband |
3 children | Accommodating
Grandmother, Sister and 2
children**

Total 11 residing in 1 room subdivided into a 2 living/sleeping spaces, a kitchen at the rear and external toilet.

Step 1: My housing process started with my family and I renting this property for 40.000kyat/month with the following facts:

Step 2: Then after living here for a year, the house owner who is resident in Ward 53 couldn't take care of the maintenance anymore. But still owned a vacant land owned in front of the house. To protect the land from being grabbed by other residents of the ward, we were asked by the owner to invest money in building on the vacant land on his behalf and by so doing reducing our rent by 50%.

Step 3: So with the help of money lenders in Ward 67, i was able to borrow 200.000kyat at 10% interest and build an extension of our home on the vacant land owned by the Landlord. We bought second hand materials from within the ward. My husband and his nephew built the house within two months.

Step 3 in housing: At this stage we don't have any water facility for our home, so we buy fresh and drinking water for our home from external sellers every two days.

Our next step will be fixing our main challenge which is the safety against break ins and protection from wind and rain as the facades are not fully closed.

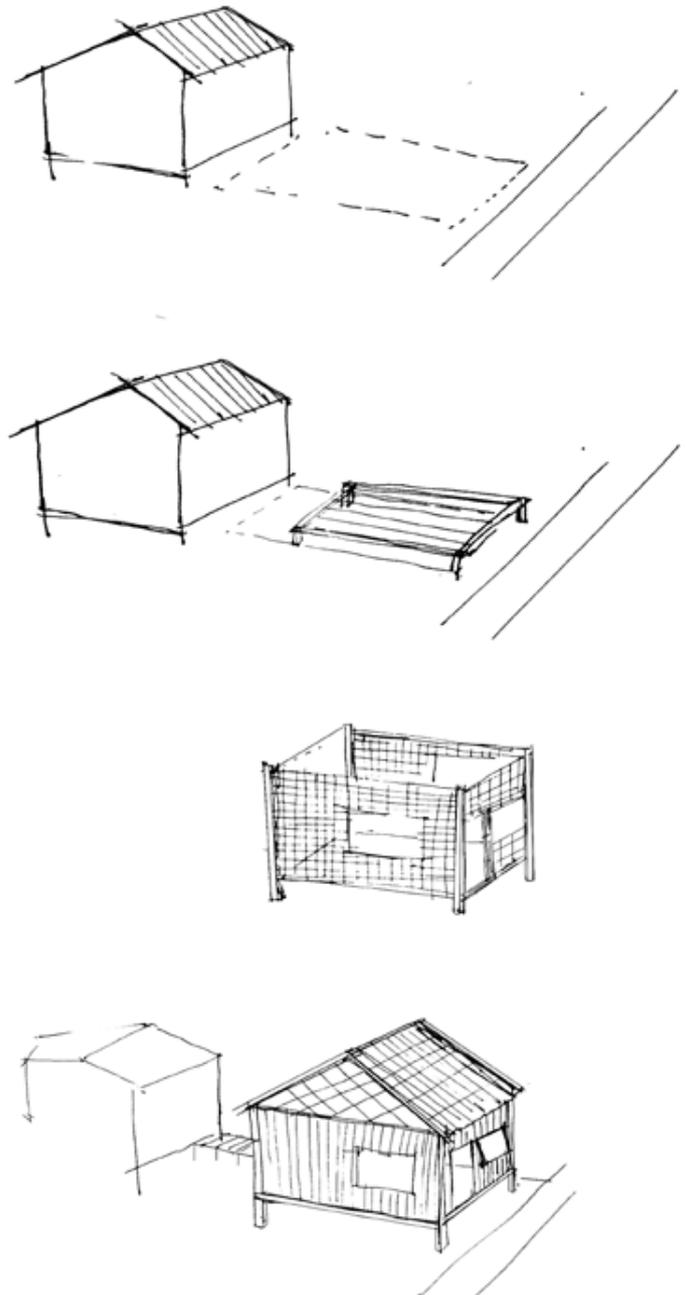


Fig. 4.8 - House Process



Fig. 4.9 - Daw Tin's Family in front of Her House

HOUSING FC

Weaknesses

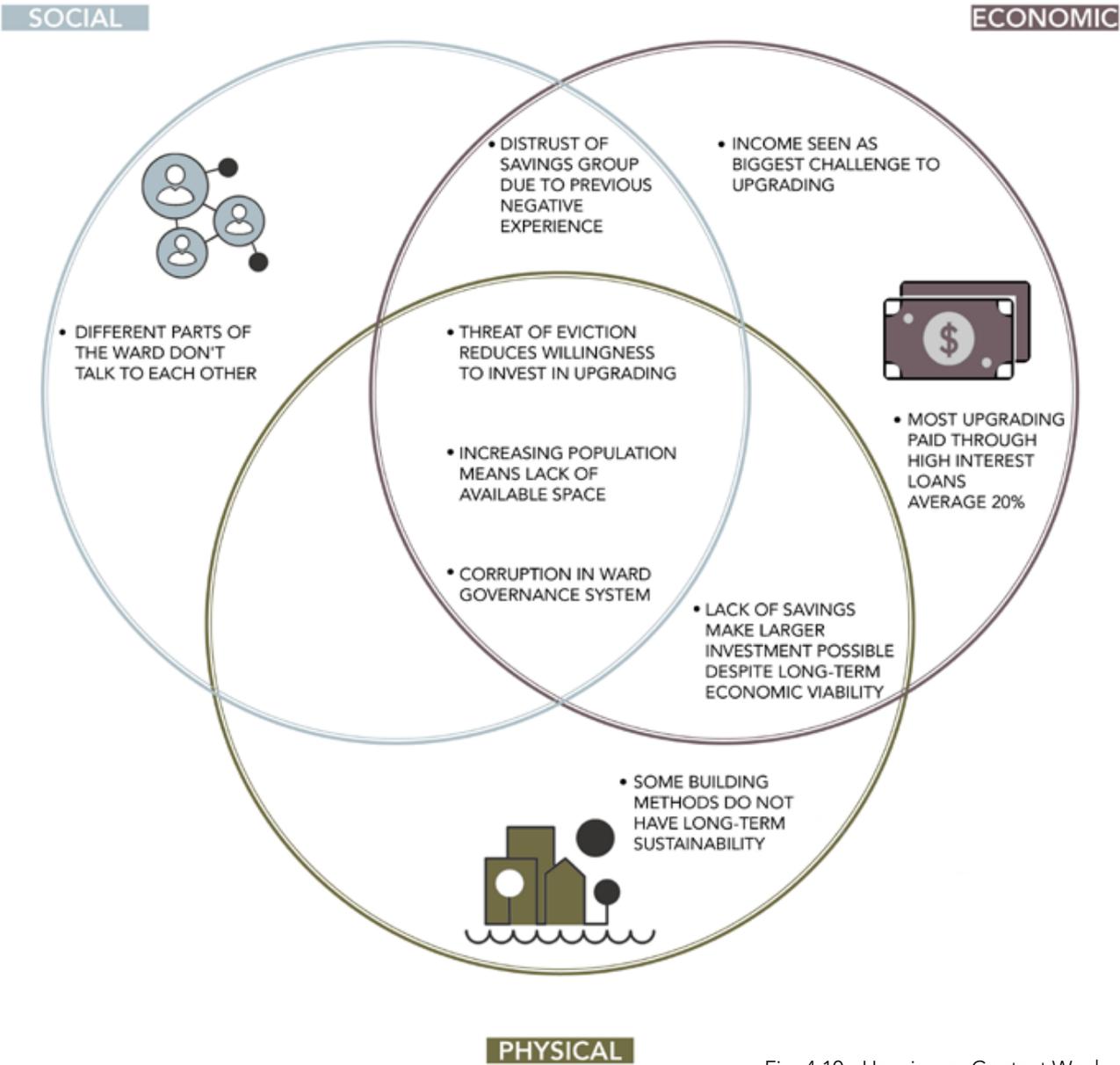


Fig. 4.10 - Housing as Context Weaknesses

OR CONTEXT

Opportunities

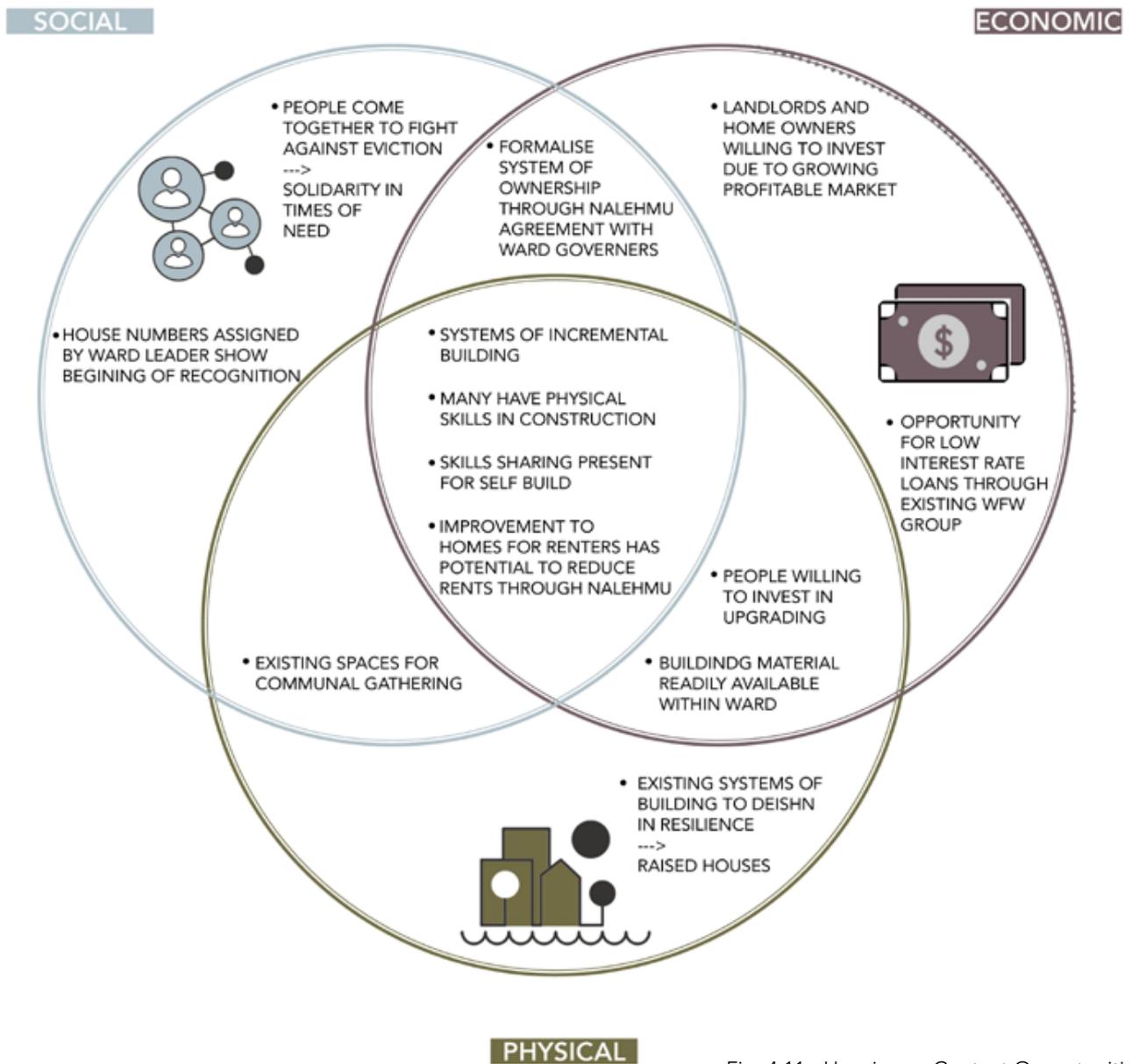


Fig. 4.11 - Housing as Context Opportunities

4.3 Existing Methods of Infrastructure Upgrading in Ward 67

In order to understand the existing methods of infrastructure upgrading and how they worked, we looked at upgrading of roads. The main findings from this were that in order to attain a good quality upgrade, a benefactor was needed to donate either money or materials.

In the cases where this happens, the community members come together and donate a small amount of money as well as their time to do the physical work required. Through talking to people involved in this process it was clear that this then had a positive impact on the social relations between neighbours.

This positive impact has been labelled on the diagrams as 'Potential', since 'getting to know your neighbours' reinforces collective action and bypasses the need for a benefactor through collective savings.



Fig. 4.12 - Ward 67 Road



Road Type 1: Community Built

This method was initiated by a wealthy resident in the ward who donated bricks to the local community to facilitate the road building. After this the cement was donated by the NLD political party, enabling the community to come together for the building process.

Fig. 4.13 - Ward 67 Road Type 1



Fig. 4.14 - Ward 67 Road Type 1



Fig. 4.15 - Road Type 1 Upgrading Process



Fig. 4.16 - Ward 67 Road Type 2



Fig. 4.17 - Ward 67 Road Type 2

Road Type 2: 1:10 Leader Managed

This method was shown to be least effective in terms of quality of upgrading. This is because it relies solely on financial donations from residents, who have a low income and in some areas are mainly temporary renters, meaning they are unwilling to invest in upgrading.

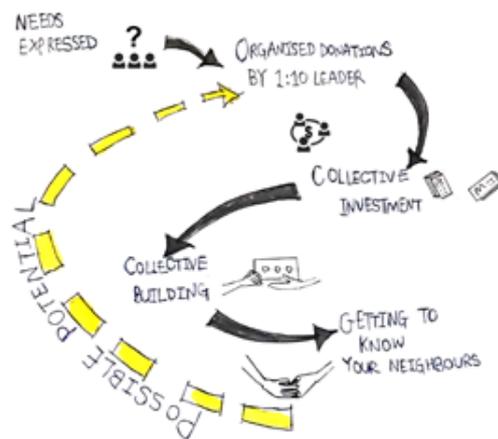


Fig. 4.18 - Road Type 2 Upgrading Process

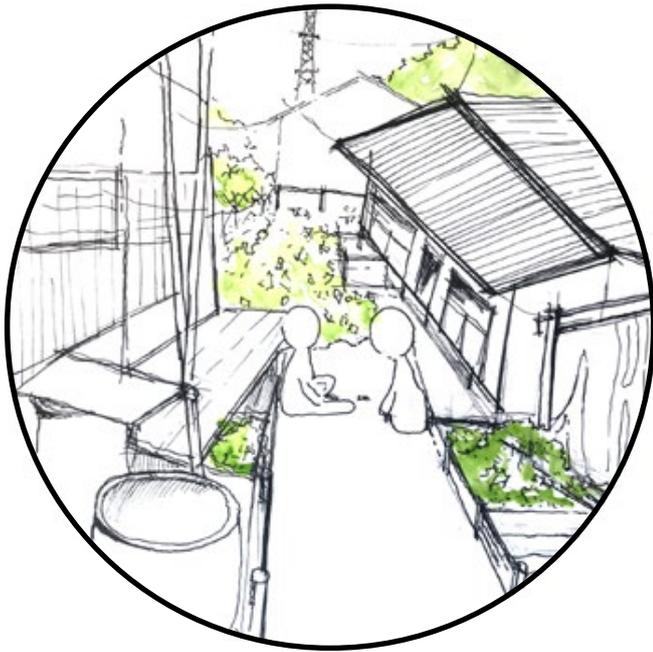


Fig. 4.19 - Ward 67 Road Type 3

Road Type 3: 1:100 Leader Managed

This method showed a clear benefit of the existing governance systems within the Ward.

This upgrading is initiated by the 1:100 leader who assesses need based on his own observation and then calls a meeting with residents on that street.

At this meeting donations by residents are agreed plus 1 person from each household to help with construction.

Additional costs are then funded personally by the 1:100 leader.

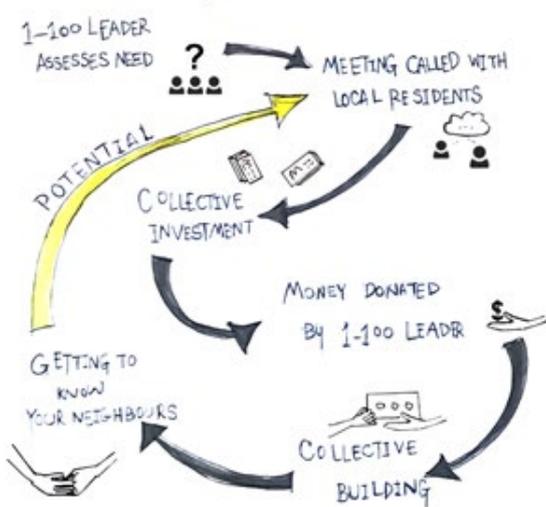


Fig. 4.20 - Road Type 3 Upgrading Process



Fig. 4.21 - Ward 67 Road Type 3



Fig. 4.22 - Ward 67 Road Type 4

Road Type 4: Government Funded

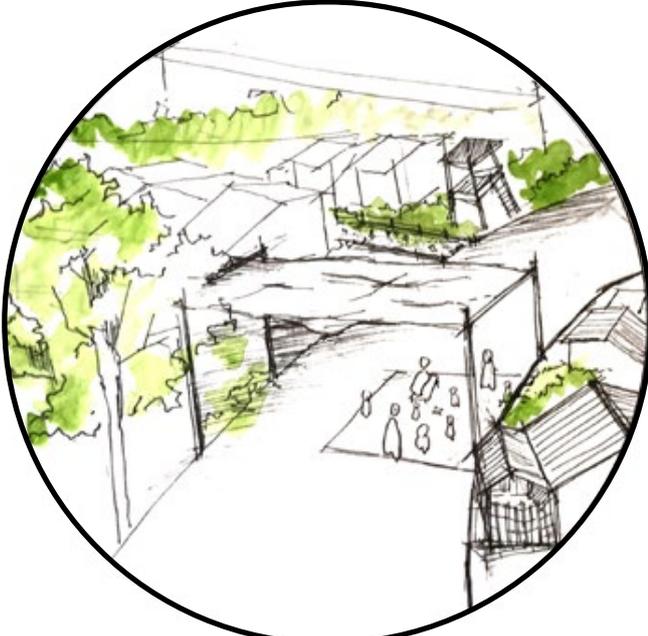


Fig. 4.23 - Ward 67 Road Type 4

In some cases the main roads have been funded and built by local government.

For this process to work need is assessed by the Yami Yapa, a committee of 9 elders, who submit a proposal to the Ward Leader, who in turn presents it to the regional government. If accepted, budget with then be allocated for specific road building.

Builders are contracted by regional government but the processes of building is managed by the Yami Yapa due to a lack of trust in the quality of construction provided.

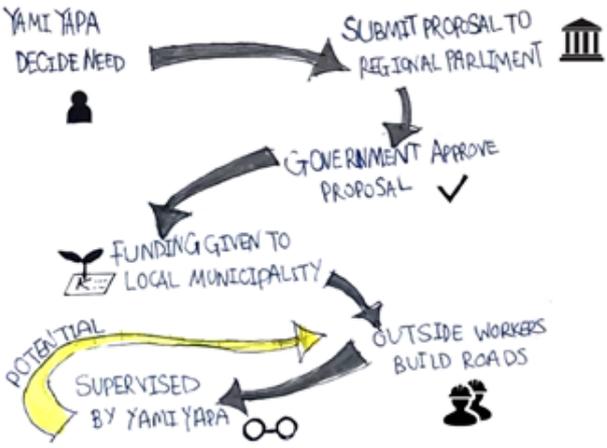


Fig. 4.24 - Road Type 4 Upgrading Process

ROADS FOR

Weaknesses

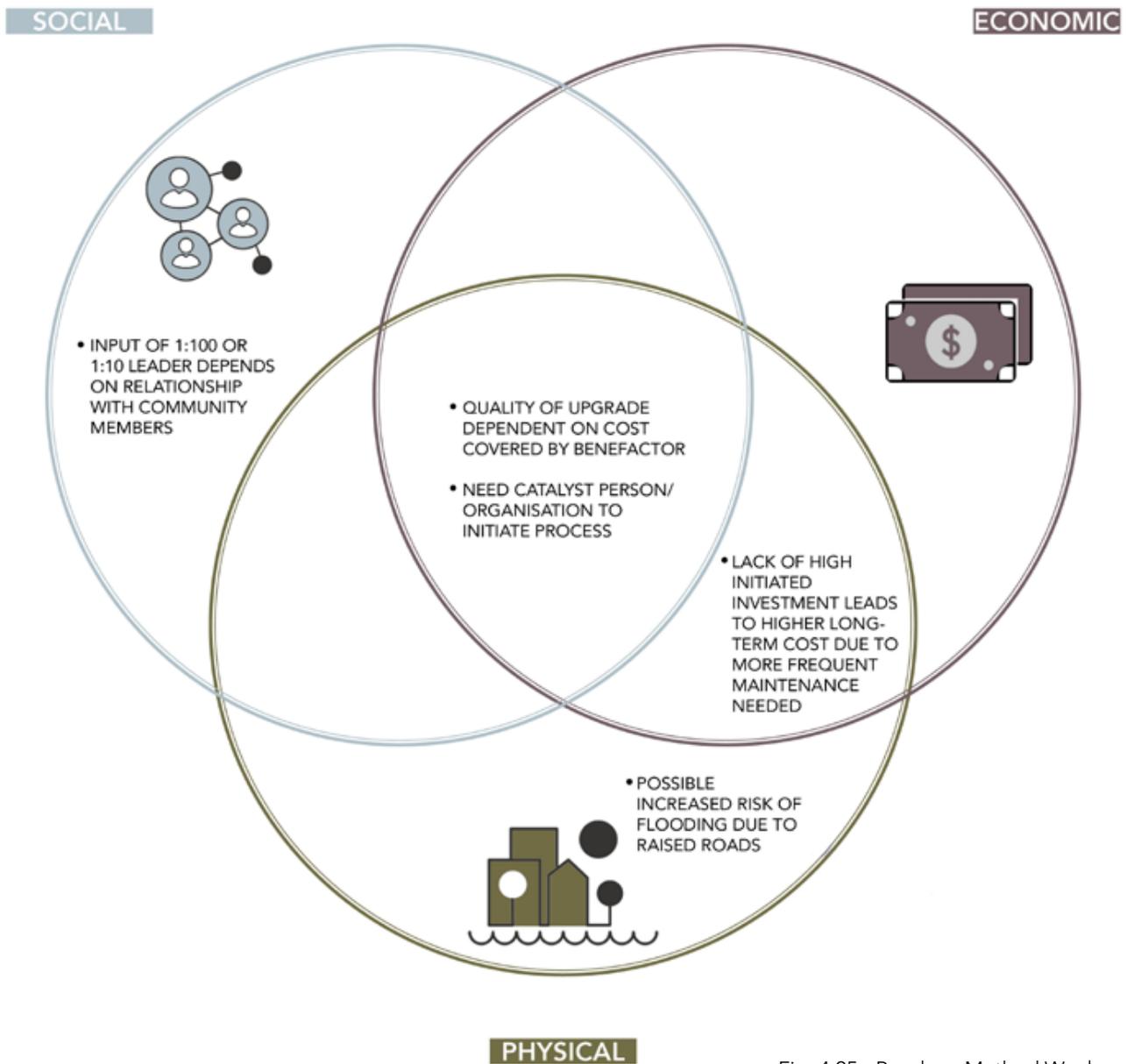


Fig. 4.25 - Roads as Method Weaknesses

Opportunities

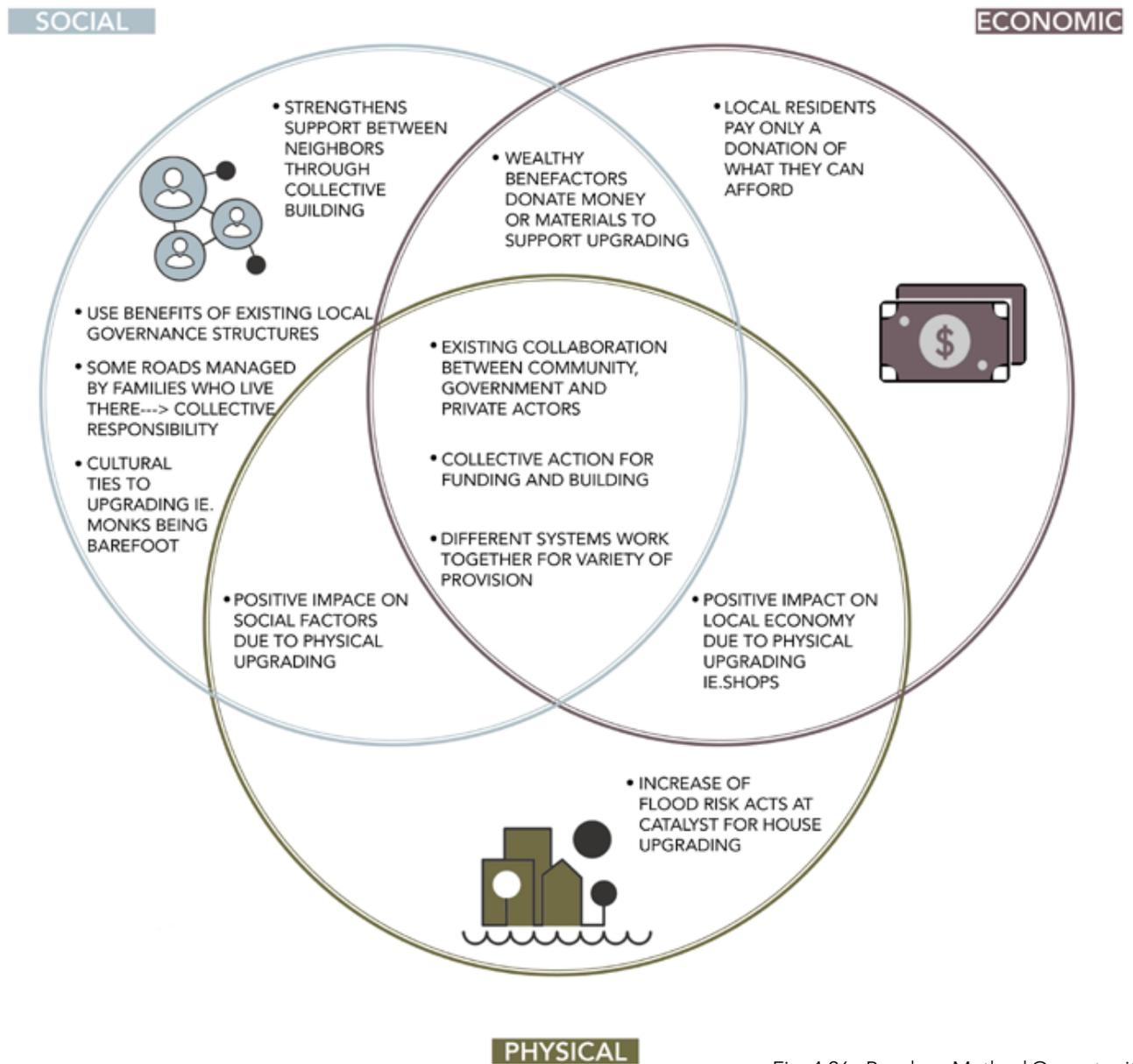


Fig. 4.26 - Roads as Method Opportunities



Fig. 4.27 - Ward 67 Water Installation Example

4.4 Lens of analysis: Water

Water usage and consumption is an integral part of housing infrastructure in Ward 67. In front of most houses, there are buckets and barrels of unfiltered or salty well water, used for bathing and washing. Since most homes are elevated, a physical mechanism that protects against flooding, some households collect water used from bathing and washing, also referred to as grey water. This is done by placing buckets under the bamboo flooring of the bathing area and collecting the water that flows through. In homes where there are latrines, small buckets of grey water are used for flushing. This recycling of water reduces water consumption and costs.

Almost always, water used for drinking and cooking is bottled and bought from outside sources. The water in wells in and around the wards is not potable, which is why it is limited for bathing and washing. Some households have rain-catchment systems over their roofs, to collect water during the rainy seasons. These systems are not very efficient due to the lack of space or high costs of storing this water.

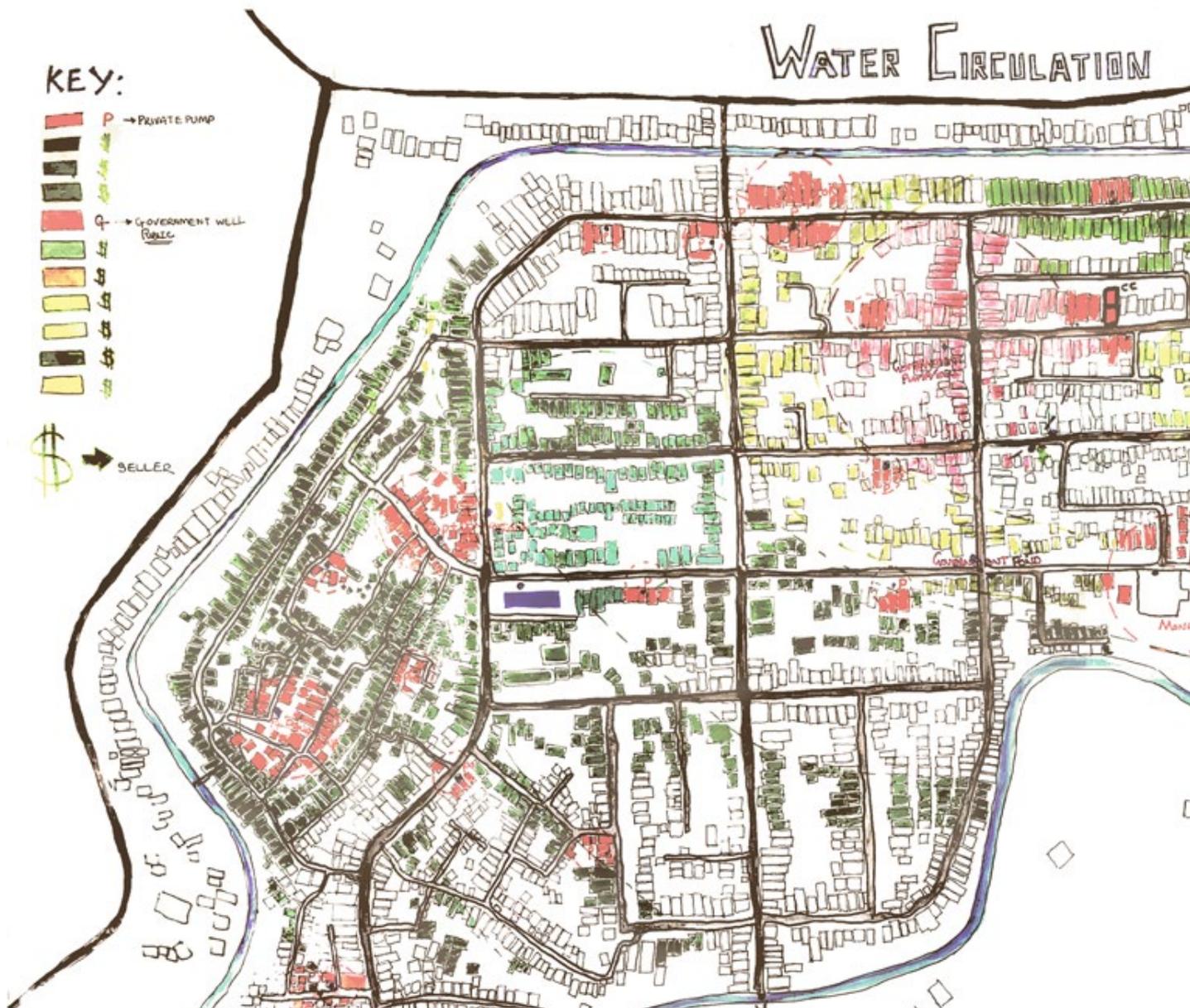


Fig. 4.29 - Ward 67 Illustration



Fig. 4.28 - Ward 67 Water Circulation Map

Water Distribution in Ward 67

There are several water resources around ward 67, and distribution depends on the type of water, its use, and household income. As mentioned earlier, drinking water is generally bottled. Vendors on motorbikes, bicycles, or small trucks frequently circle the ward selling bottled water at a fixed price. This is a major cost for households as it is a daily purchase, and there are no alternatives yet. There are several public wells around the ward where people can collect unfiltered water for bathing and washing for free. Since carrying water is physically taxing however, most people buy well water from vendors who also drive around the ward selling from door to door. There is some form of Nalehmu at play here as there is an understanding of which households buy from which neighbors based on trust and neighborly relations. It is rare that different water sellers compete in certain neighborhoods.

Some higher income households have their own wells and sell water to nearby homes. Similarly, some of those who can afford installing pipes get water straight from private well owners, paying for water services on a monthly basis. This does not apply to all who can afford pipes, as many well owners will turn down those they do not trust yet. This is out of fear of installing a long-term fixture in what could be a temporary home. In general, the quality of the pipes is not optimal as they easily break, and it is the water-provider's duty to maintain and fix the pipes. Lastly, a common mode of distributing water is through donations. This includes private well-owners that donate to friends nearby, those who donate during religious festivities, and government parties who donate close to election periods.

WATER AS A LENS

Weaknesses

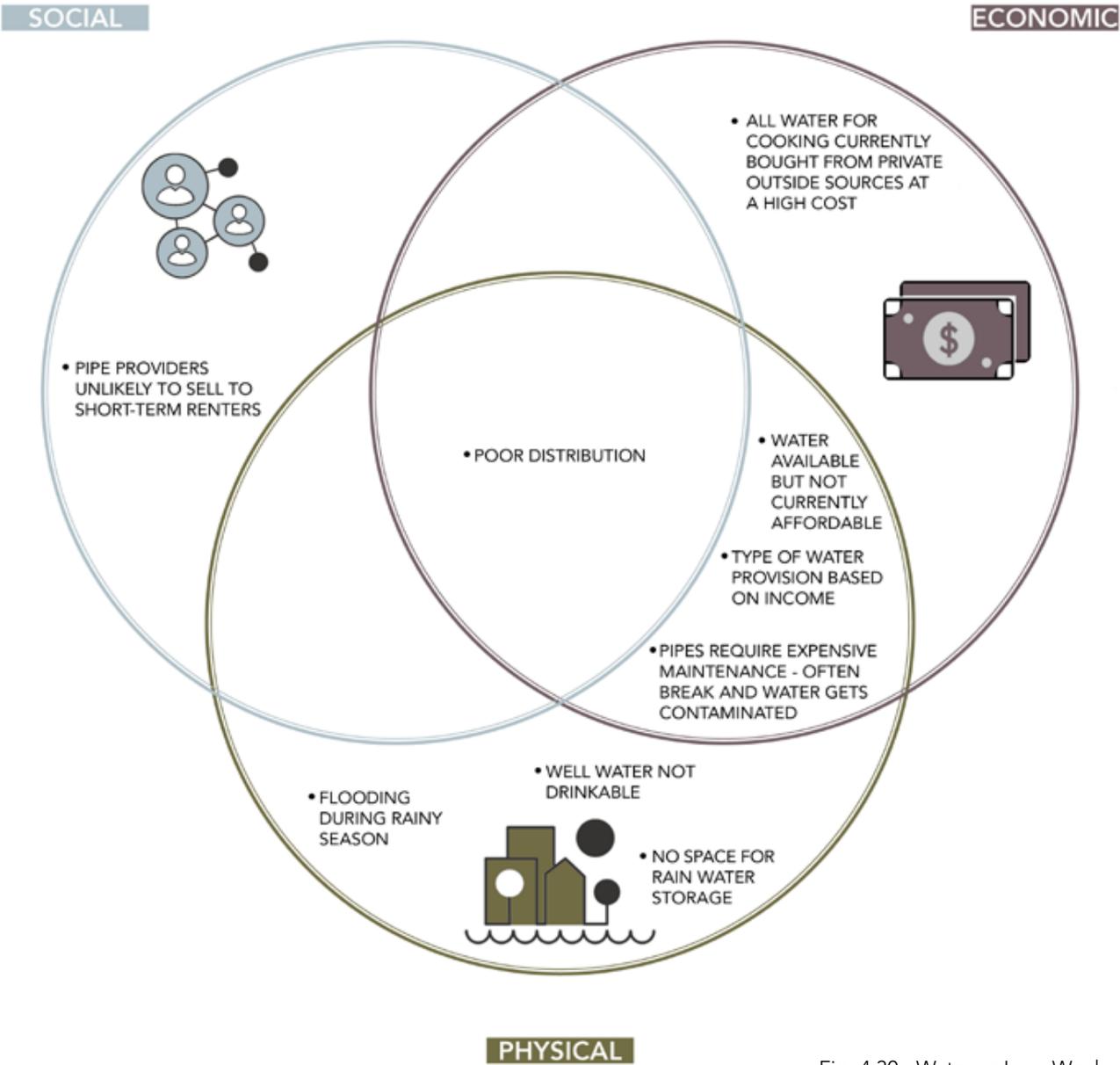


Fig. 4.30 - Water as Lens Weaknesses

NS OF ANALYSIS

Opportunities

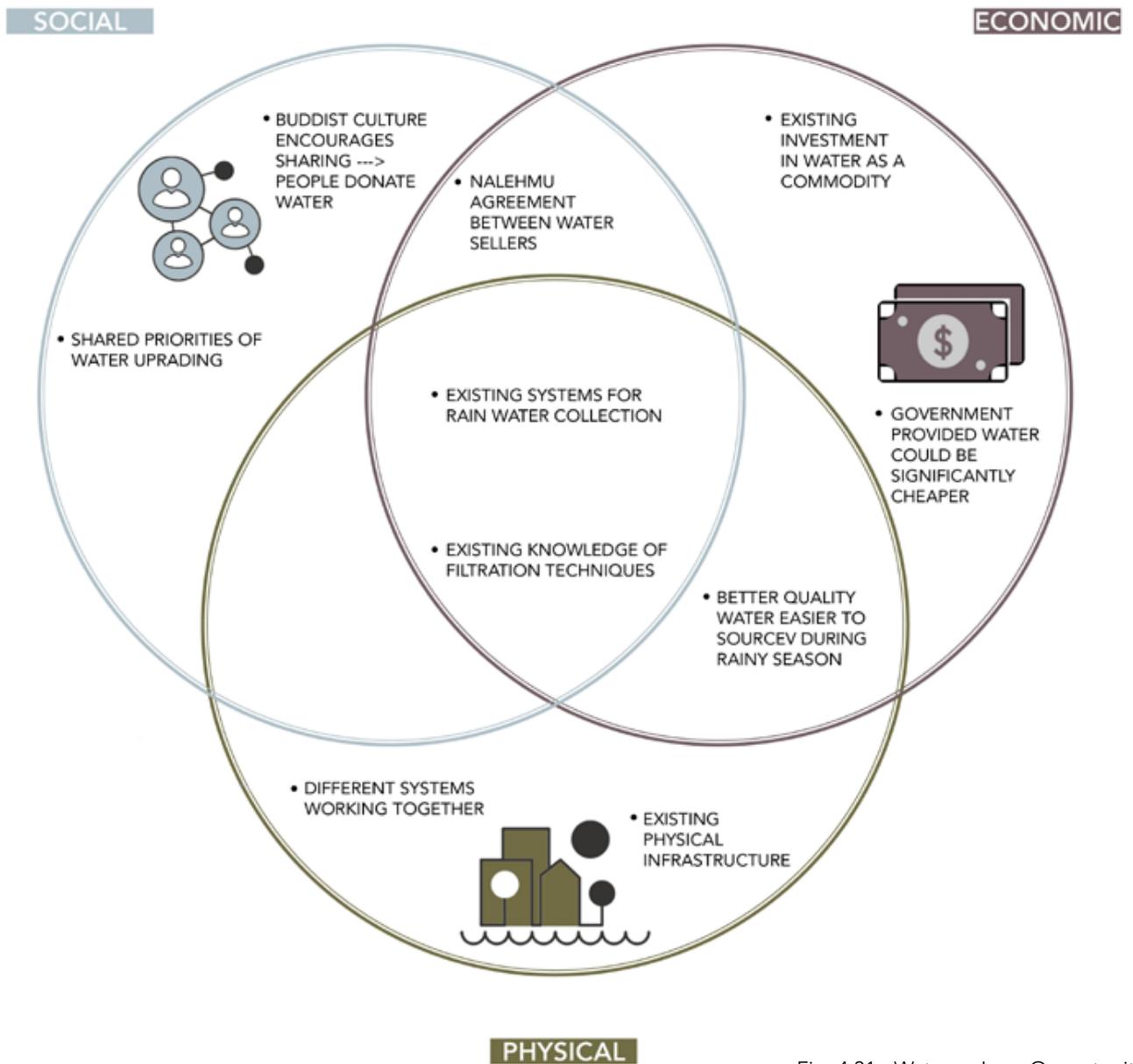


Fig. 4.31 - Water as Lens Opportunities

4.5 Analysis

From our field research we have identified the key issues with existing infrastructure provision in Ward 67 (looked at through water), but more importantly we have seen the main potentials of existing socio-economic infrastructure to be able to upgrade physical infrastructure through collaboration.

The WFW model of collaborative saving, as well as their existing presence in Ward 67, presents a strong opportunity for collective action to be facilitated through the savings group, addressing the current perception of income as the biggest barrier to upgrading. Using housing (in its multiplicity) to understand the context of upgradation we understand that people are willing to invest, especially where they feel that the improvement of the area could lead to less evictions, and eventually recognition of their status as residents.

Looking at methods of upgrading roads we have seen that upgrading through collaboration works best when those collaborating involve actors considered both informal and formal, and across multiple scales, including: community members, ward governance, private investors and regional government.

Due to using water as an analytical lens for understanding existing infrastructure provision, strategies presented will use water as an illustrative tool for suggesting ways of collaborative upgrading.

The following page digramtises our findings across all themes, showing them through the lenses of physical, social and economic. Statements written in bold represent the findings which are specifically carried forward to inform our strategies, used within a wider understanding of the context.

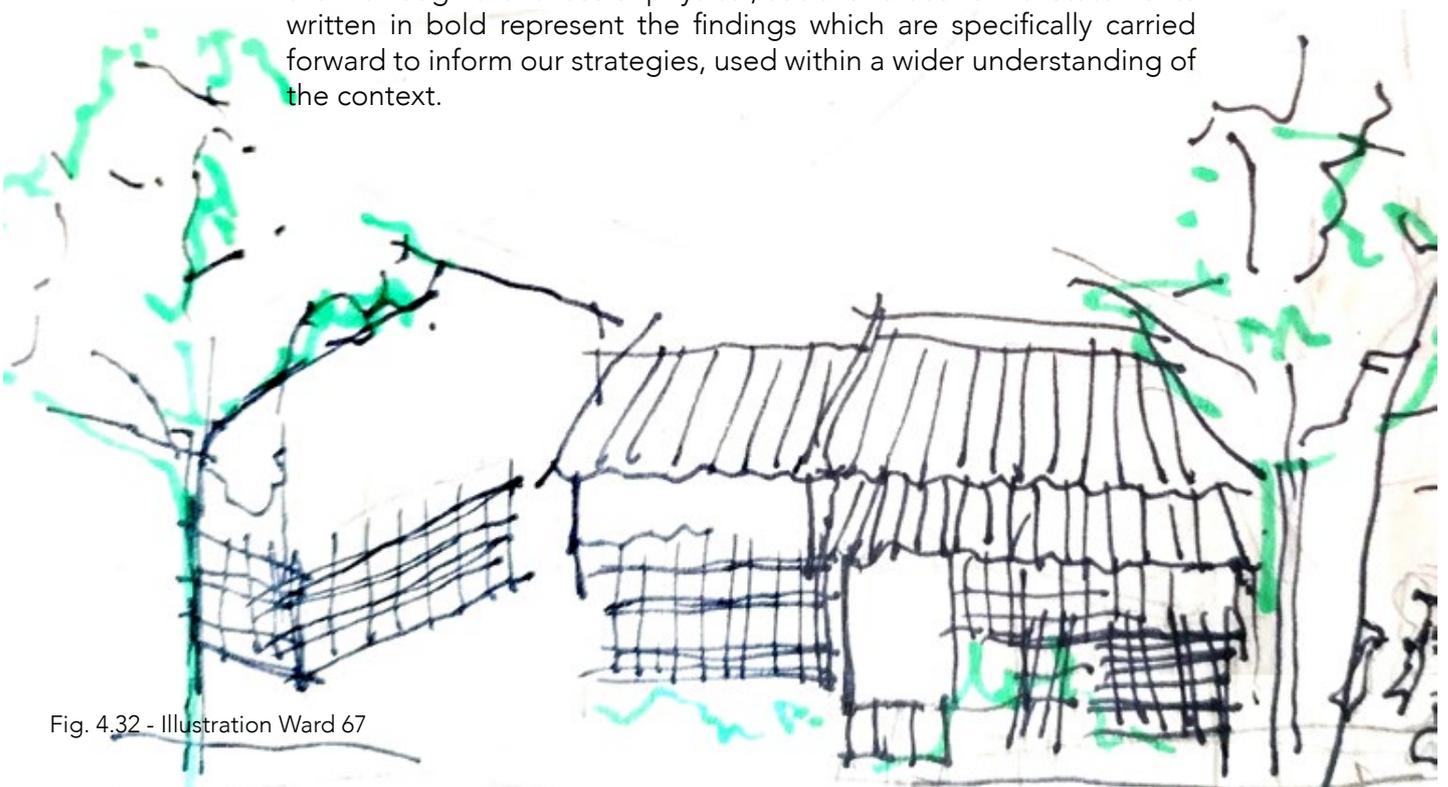


Fig. 4.32 - Illustration Ward 67



Fig. 4.33 - Children in Tree at Ward 67

ANALYSIS OF COM

Weaknesses

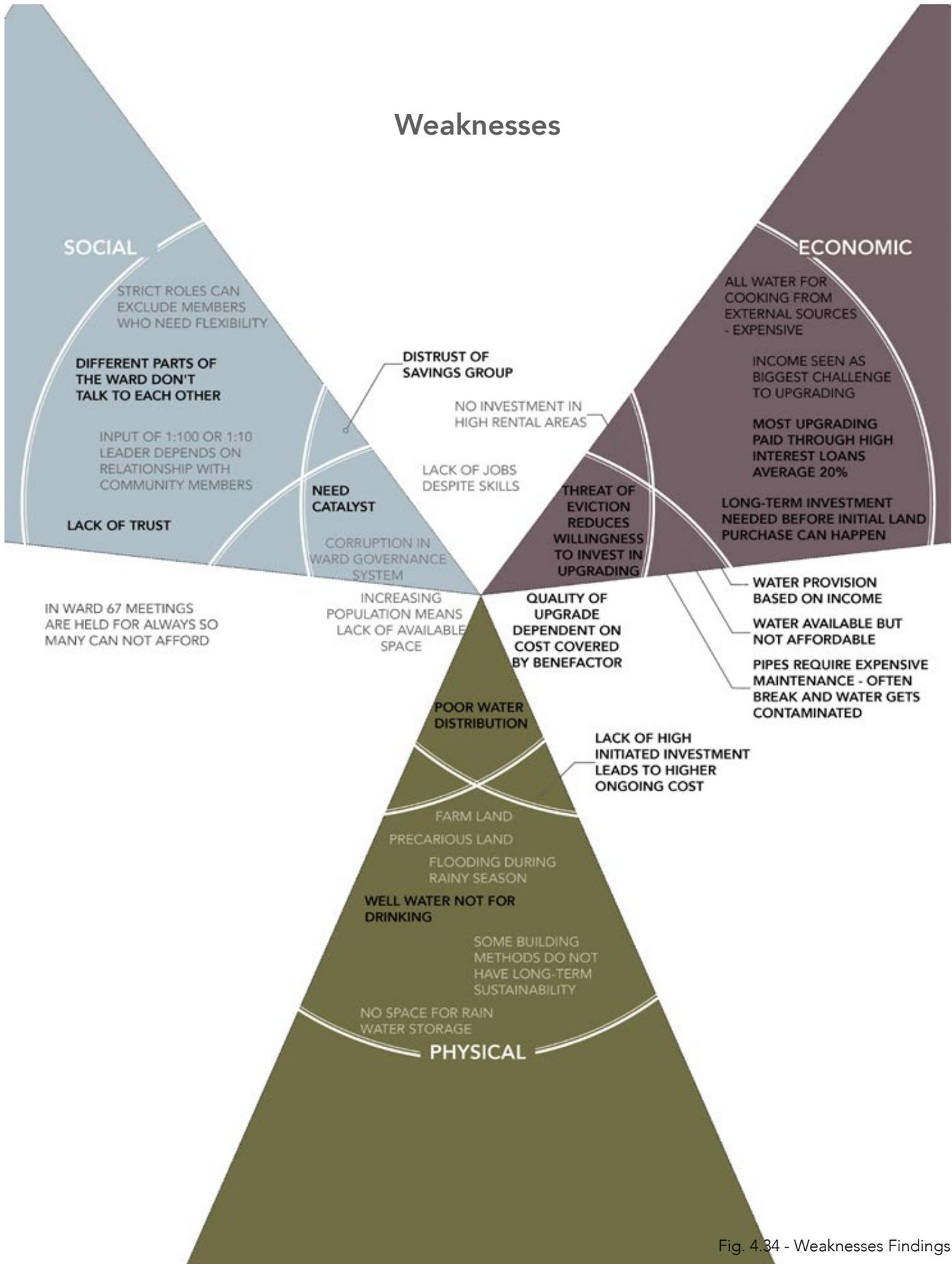


Fig. 4.34 - Weaknesses Findings

COMBINED FINDINGS

Opportunities

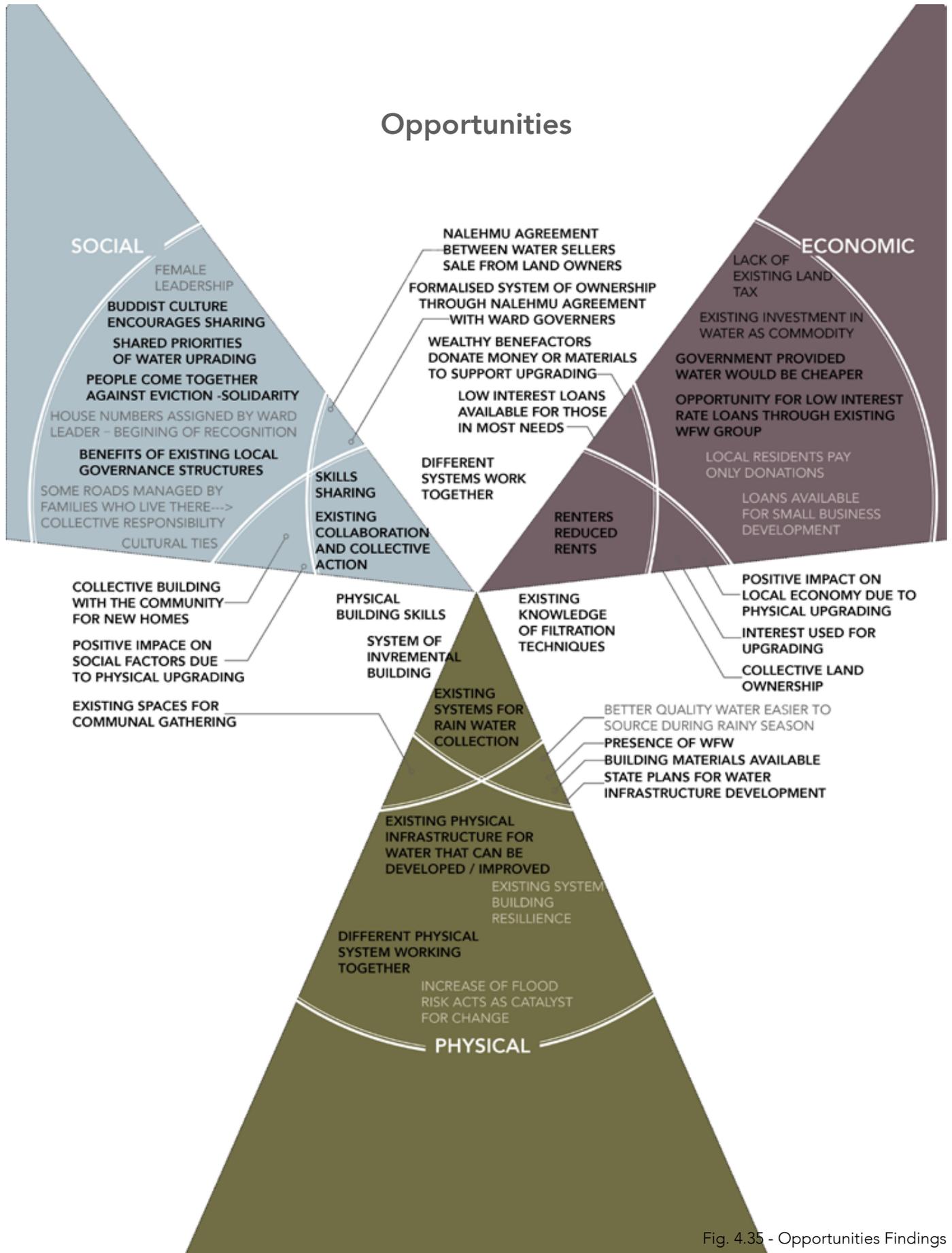


Fig. 4.35 - Opportunities Findings



Fig. 5.0 - Drinking Water Reservoirs in Yangon



5.0 Strategies

5.1 Vision, Principles and Guidelines

VISION

UPGRADATION THROUGH COMMUNAL & INSTITUTIONAL COLLABORATION

PRINCIPLES



Building community resilience to adapt to past transitions and future transformations



Optimizing and building upon locally established systems



Promoting local economic development



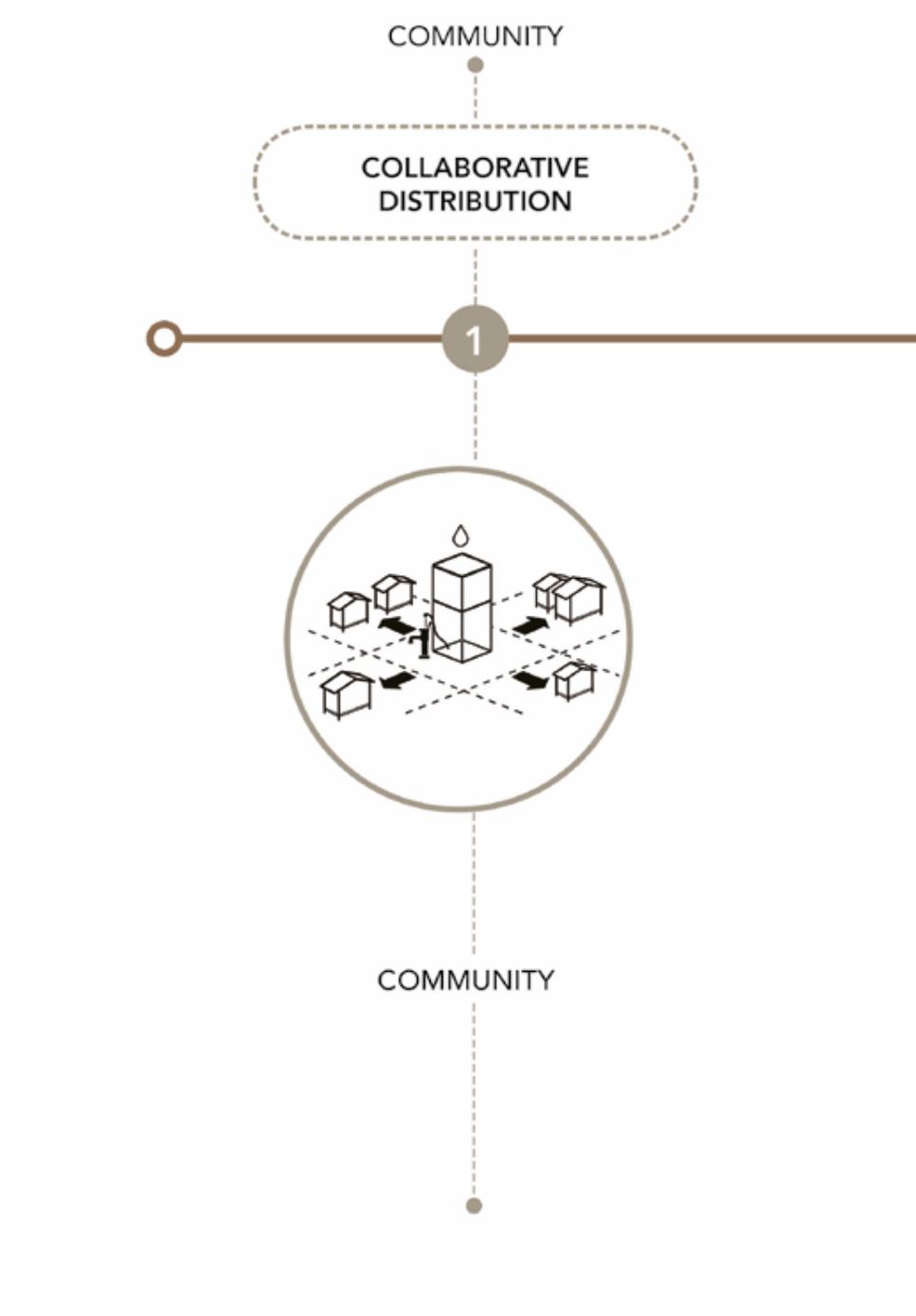
Empowerment through existing individual and collective skill sets and knowledge

GUIDELINES



Fig. 5.1 - Diagram of Vision, Principles and Guidelines

5.2 Interlinking Strategic Development



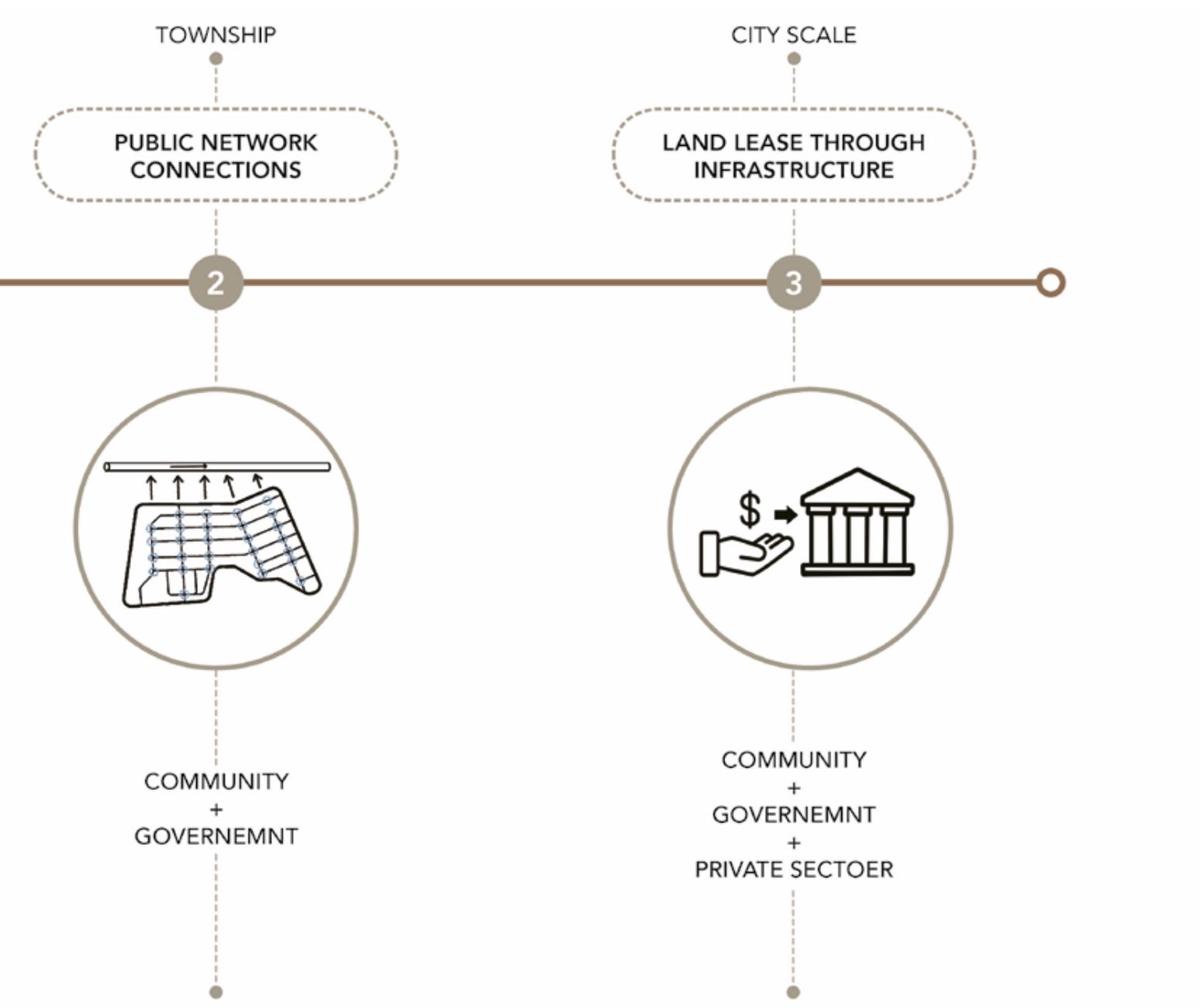
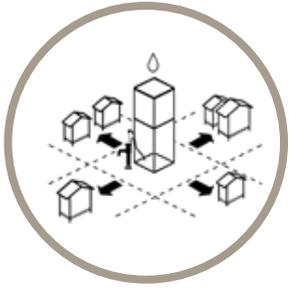


Fig. 5.2 - Diagram of Strategies



5.3 Collaborative Water Distribution

EVIDENTIAL OPPORTUNITIES

Physical distribution infrastructure present along certain routes for provision of water from private sellers to multiple households. Despite the poor physical condition of these pipes (fixed and flexible) that probably contribute to major health challenges, there's potential for recalibration of a functioning system.



Fig. 5.3 - Broken Pipe



Fig. 5.4 - Manual Pump at House

Social systems in place for the donation and sharing of water amongst communal households in possession of wells and those without. Government donations taking place from time to time. The local culture of sharing, based on Buddhist traditions, can be built upon for more effective Distribution.

High amount of economic investment in homes for individual wells and pumps and private water businesses' water infrastructure. Potential of reducing the total cost over the ward per person through communal investments.

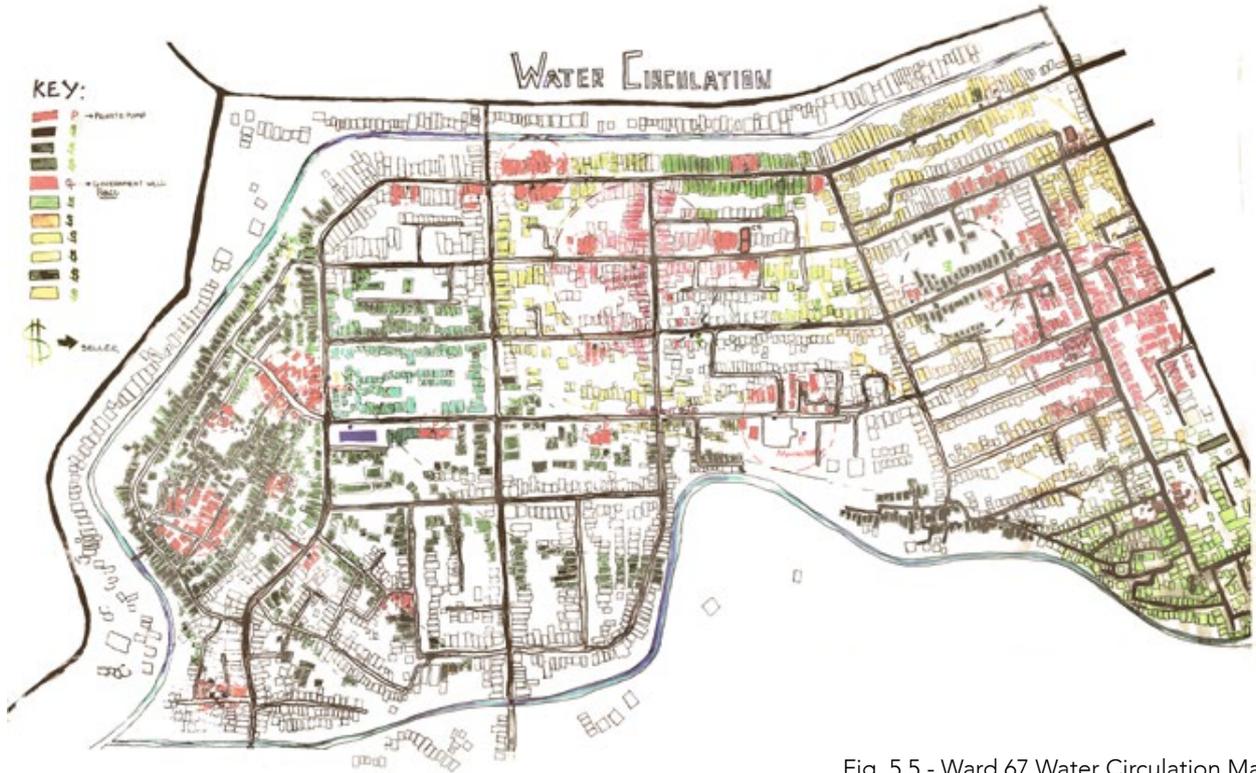
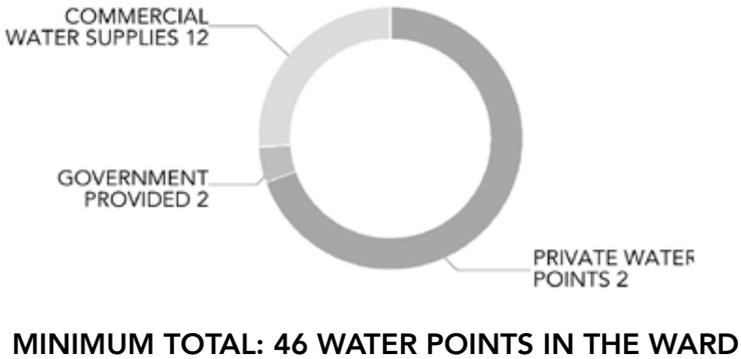
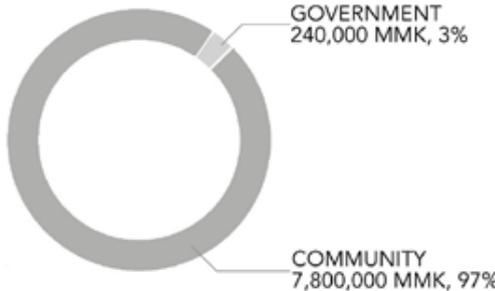


Fig. 5.5 - Ward 67 Water Circulation Map



MINIMUM TOTAL: 46 WATER POINTS IN THE WARD



MINIMUM OF KYAT INVESTED IN WATER SO FAR

Fig. 5.6 - Numbers and Statistics for Water

EXISTING BASIS FOR COMING UP WITH THIS STRATEGY

Given our previously mentioned accesses to water, the settlement has become a space of unequal distribution of water in quality and economics.

Outside of Ward 67 in areas serviced by YCDC and majority of countries in the world, water is deemed as a basic necessity to which all citizens have a right to access with equal communal contribution according to daily usage. However, within settlements like ward 67, water has become a commodity with poor quality service and high prices.

The lack of state collaboration in terms of services and infrastructure has led to personal and private initiatives and as a result an imbalance and inequality in the usage of water in the housing process of the residents.

STRATEGIC PROPOSAL

Building on the existing initiatives, opportunities, methods and resilience enacted by the community residents, the proposed strategy is a collaborative and balanced redistribution method that will gradually even out the commodification of water.

The strategy entails the use of the existing Savings-Group Community Center Water facility to distribute water for a comparable YCDC price and reinvesting that earned amount into another pump location for the same amount of money. The invested pump location then follows the same cycle of reinvesting all income into another pump location. This is called; "The Expansion Model".

Based on this strategy, water can be provided at a better rate and form a basis for communal collaboration to save for bigger upgradation plans and security of tenure.

"The person who sells water in the ward is a God"

SG member

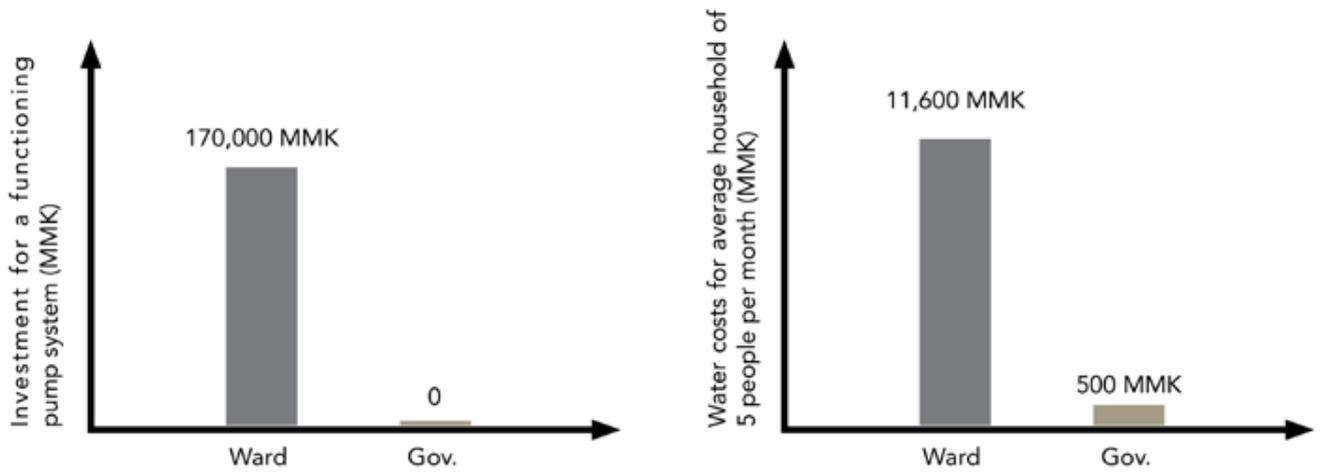


Fig. 5.7 - Numbers and Statistics for Water Costs and Investments

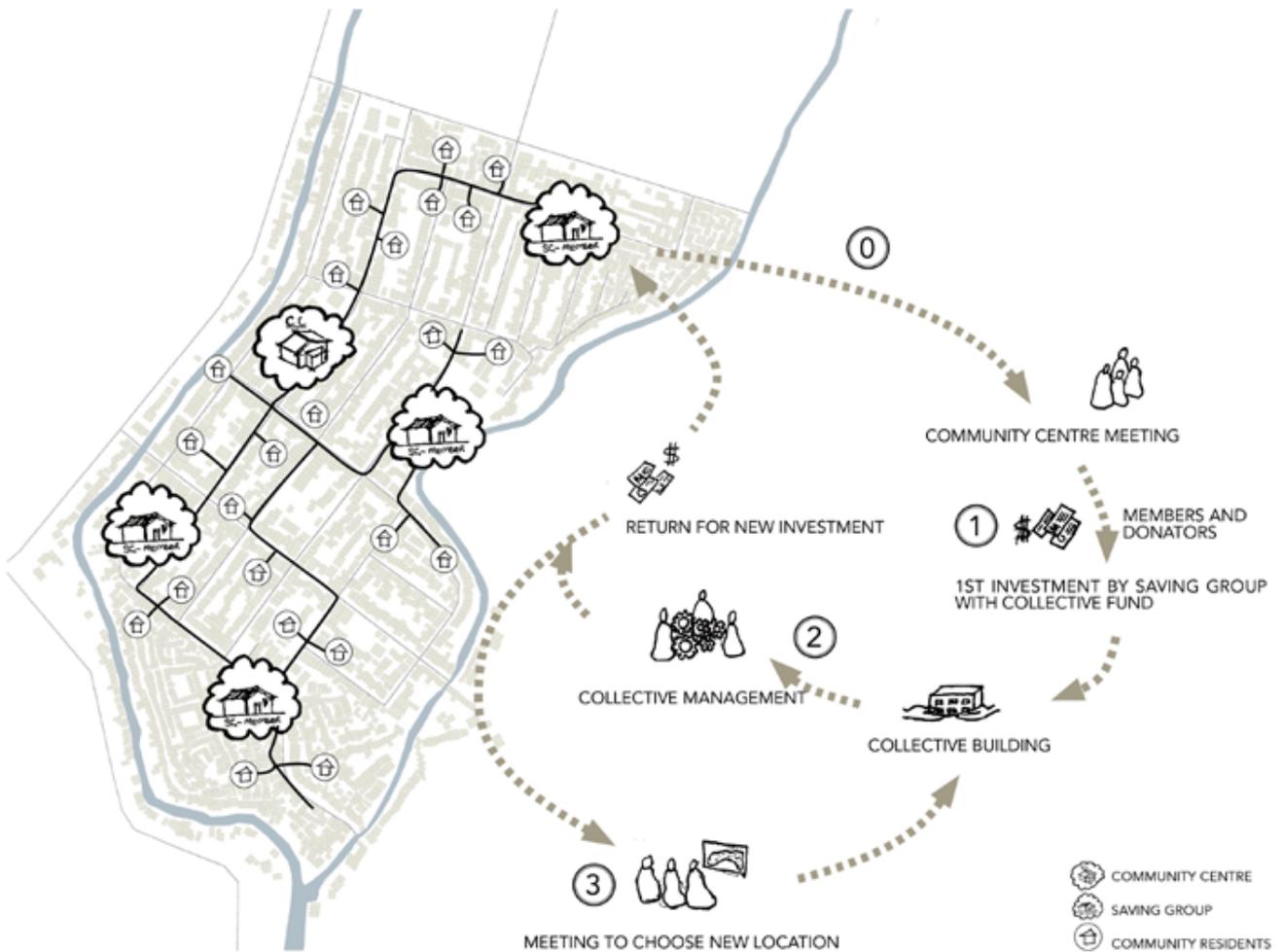


Fig. 5.8 - Map and Process for Strategy Implementation

IMPLEMENTATION PROCESS, ACTORS INVOLVED & TASKS

0 - Starting with a the saving group (SG) community center well as the first redistributive source, an agreement needs to be made amongst all SG members to take on this redistributive expansion model and determine the target area.

SG balance 2018: 3 Million Kyat.

SG water redistribution for 200 Kyat/day | 1,400 Kyat/week | 5,600 Kyat/month | 72,800 Kyat/year

5 Households (HH): 364,000 Kyat/year | 10HH: 72,8000 Kyat/year | 20HH: 1,456,000 Kyat/year

In 3 years: the SG's revolving funds can increase to approximately 1,456,000 Kyat/year, in addition to the continuous savings of the members.

Yielding in 2021/22: 6 Million savings + 4.3 Milion = 10.3 Million Kyat.

Actors & Tasks: SG members to agree on new endeavour | WFW Technical Support in setting up Project Plan & Financial Model

1 -SG to invest in purchasing a solar pump and heightened storage tank of 1,000 litres to facilitate effective distribution of water and employ a water distributor to carry out the distribution process.

Cost Estimate 2.6 Million Kyat upfront for pump and installation.

Actors & Tasks: SG members to agree on new endeavour | WFW Technical Support in setting up Project Plan & Financial Model | Electrical Engineer to install pump and Builder to erect a new Bamboe tank

2 - SG to invest in pipe work distributing water from the SG well to connected households. Each household to erect a bamboo pole structure to hold each pipe which will also serves as fire risk protection. Collaborative distribution with investments on both ends.

3 - SG to identify next households to locate a well and pump infrastructure. Starting with a manual method, distributing with buckets and kegs by SG members and return of funds to SG balance.

This process continues to multiply itself to the point of a more equitable water distribution.

Setting up a system in place for future modifications

BENEFITS & OPPORTUNITIES

WARD

- Better connections and less damage of pipes due to elevated approach to distribution and separation from insecure road infrastructure.
- Multiple sources reducing the water prices and creating a higher savings balance in the community. Each household can save 1500 Kyat by participating in the water distribution network, which then can be saved with the savings group for future investments.
- The water nodes can be combined in the future with governmental infrastructure for agricultural purposes and reduction of required capacity.

TOWNSHIP

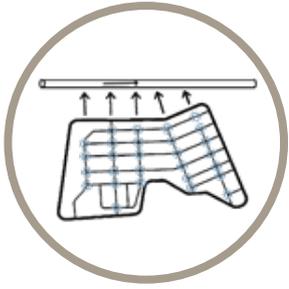
- Opens the opportunity for the township as a whole to be recognized due to resilience in having a self organised water distribution network. This system within the ward can be scaled up to connect with the existing system of the township.

CITY

- The expansion model can co-exist next to the city model as it reduces the delivery load of the formal water network system.
- Knowledge can be shared across Yangon & Myanmar for the further recalibration and support of governance tasks.



Fig. 5.9 - Bamboo in Ward 67



5.4 Institutional Support In Water Supply & Social Distribution

EVIDENTIAL OPPORTUNITIES

- Presence of YCDC water distribution pipe along the boundary road of Ward 67, street name Ayer Wun Setsat Road. With the ward so close to the water infrastructure, the residents find themselves being in close proximity to such key infrastructure.
- Social networks present between the community representatives in the ward and governmental institutions (YCDC).
- With 45% of the city residents being perceived as squatters, the collection of government taxes and revenue leaves out almost half of the citizens. Projecting the amount of households in ward 67 to current water payments in Downtown Yangon, the following uncollected amount provides an opportunity for governmental institutions to supply services.

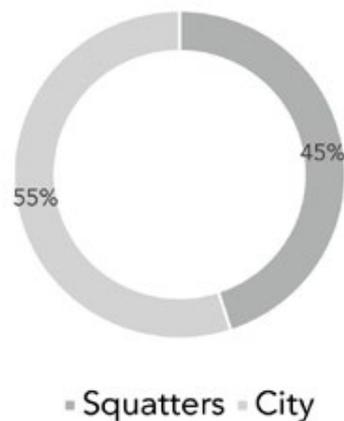


Fig. 5.10 - Squatters and City Residents

Inclusion of W67 and other settlements will increase government revenue by another 45 million on a yearly basis which could be reinvested in citywide infrastructure.

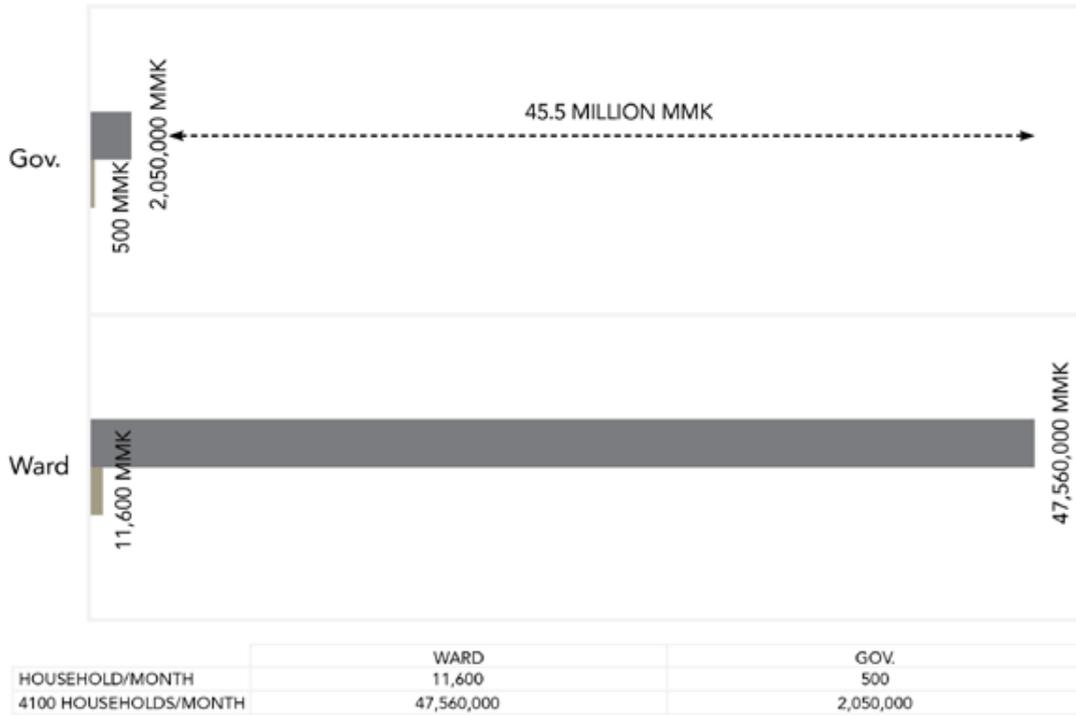


Fig. 5.11 - Water Costs of Squatters and City Residents

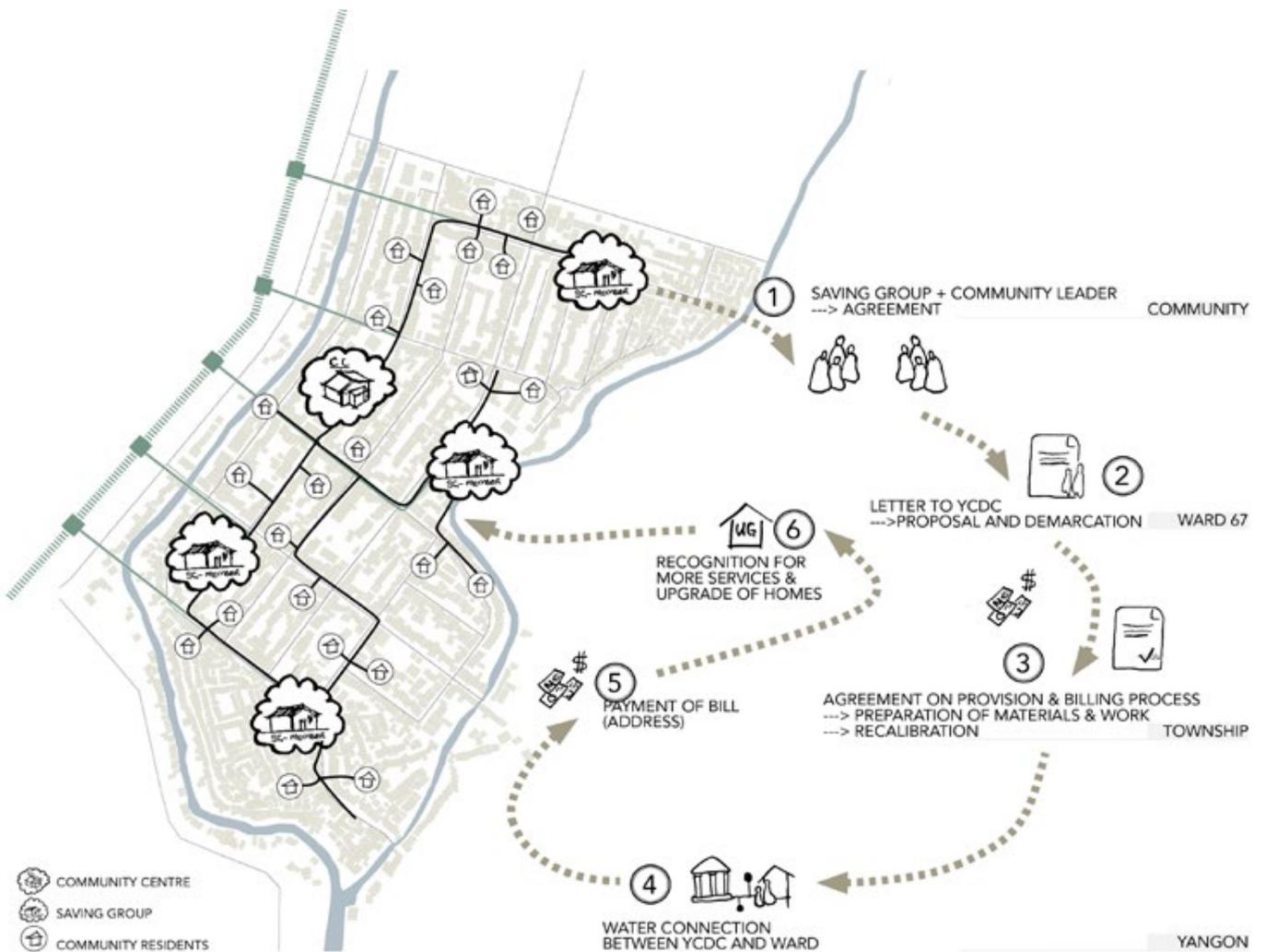


Fig. 5.12 - Map and Process for Strategy Implementation

EXISTING BASIS FOR COMING UP WITH THIS STRATEGY

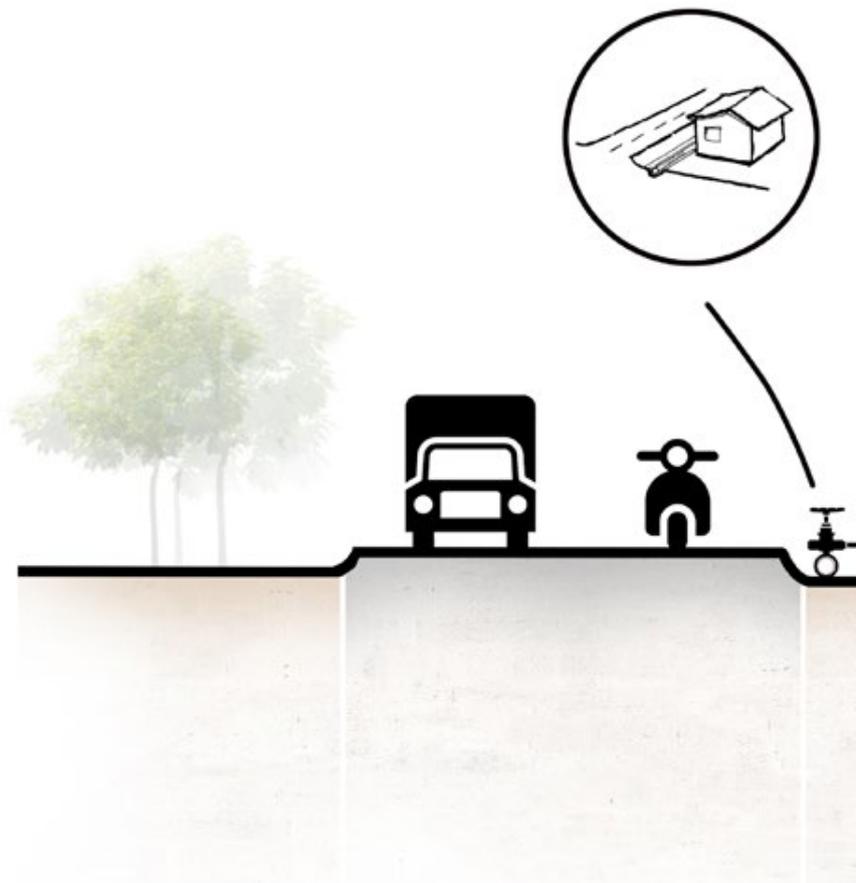
At this moment, government owned water provision is not available to the residents of Ward 67 except for a handful with governmental affiliations.

This lack of access is caused by recognition as being informal. However water distribution still takes place in the ward on individual and communal basis.

Water suppliers, with wells and pumps provide water to homes through fixed, temporary, and flexible pipes. Mobile infrastructure is also often employed and donations of water take place..

So though the ward is recognized as being informal, the same system of demand and supply for water exists, but the transactions are not directed towards regularized water and services delivery.

This self supporting practice of the ward sets up a catalyst for trust from YCDC, recognizing the will to pay for water provision. Funds which go a long way in the support of government budgets and lead to recognition.



STRATEGIC PROPOSAL

Building on the existing distributional infrastructure of the ward and a pre-arranged mobilisation through equitable water distribution, the proposal of this strategy is for the mobilisation of community representatives like the Yamiyapa and the Funeral Service to jointly apply for water connection to the existing infrastructure.

Achieving this allows feeding and distribution of such services through the existing network to become more affordable.

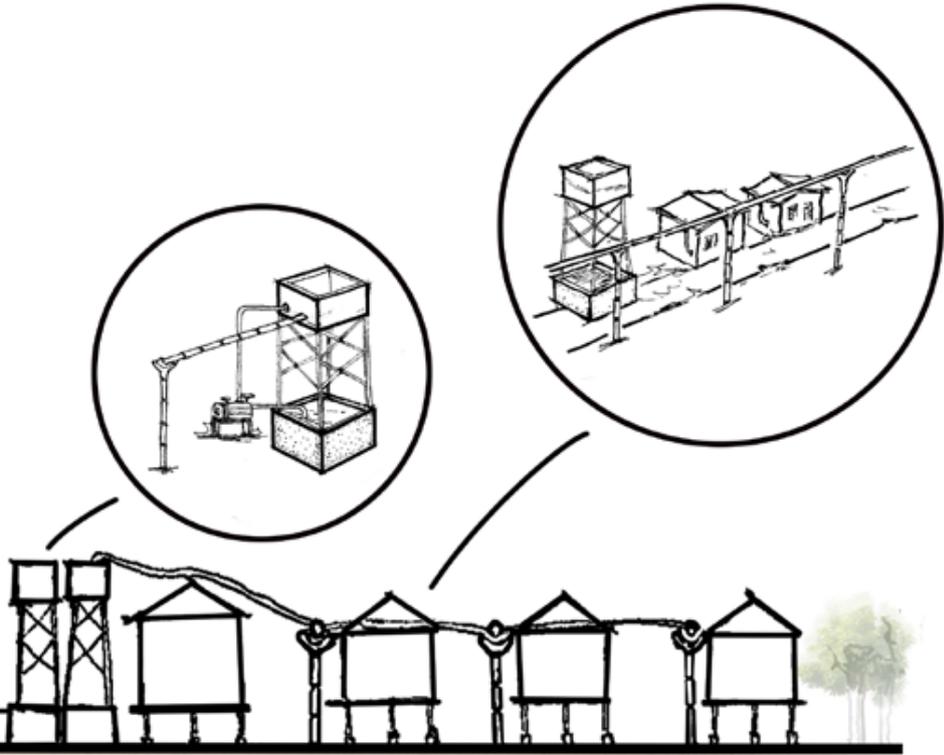


Fig. 5.13 - Section of Distribution System

IMPLEMENTATION PROCESS, ACTORS INVOLVED & TASKS

0. Building on the successful implementation of Strategy 1 and a higher level of community solidarity in decommodification of water, a united front can then be mobilized for the implementation of this strategy.

1. Discussion of collaboration with YCDC for water supply on existing ward infrastructure.

Actors & Tasks: Community Representatives as Yamiyapa & The Funeral Service to initiate engagement with YCDC in collaboration with the Savings Group members.

Technical Expertise from WFW required to draw up detailed plan and demarcation of piping.

YCDC to open 2-3 substations along the road to feed the ward.

Community pipes to be provided by savings from SG connecting the substations to already existing water nodes for further distribution.

2. Proposal letter & Detailed Engineering Plan to be issued to YCDC for final agreement.

Payment plan from community of 500 Kyat/ month/ 4100 HH : 2 Million Kyat/month.

Cost Estimate: 1 Substation Pump for approximately 2 Million Kyat.

3. Agreement on provision of water and steps to be taking till billing to be set up and signed.

Community to prepare lanes of piping network from substations to existing community tanks.

3a. Collaboration with Ward Governor and Yangon Admin Leader for support of process in conjunction with preparation of infrastructure.

Actors & Tasks: YCDC, Ward Representatives and Legal Support from WFW to maintain solidarity and responsibilities.

4. Water connection takes place and the usage of poor quality well water is resolved.

5. Payment of bills with confirmed address.

6. Scaling up possibilities to tackle other infrastructural needs and upgradation of homes.

BENEFITS & OPPORTUNITIES

WARD

- Allowance for more home upgrade initiatives to be taken. With more elements leading to secure tenure, the more households can invest. Nonetheless, the health benefits and 98% reduction in water costs are significant benefits.

TOWNSHIP

- Improved collaboration on a township scale as knowledge can be shared across the township and costs of infrastructure can be reduced whilst sustaining access to the infrastructure.

CITY

- Supporting the cause for access to water eases the governmental challenge of limited land and finance to provide homes and services. Accumulated funds can be reinvested to cater for the housing needs of the city which is currently barely covered by 20%.



5.5 Infrastructure Through Land Lease

EVIDENTIAL OPPORTUNITIES

Based on strategies 1-2, the resilience of the community has been shown including the willingness to contribute to the citywide growth and provision of housing and services.

Ward 67 land, though originally designated for agricultural process is now in relation to surrounding land used for housing. This usage shows the growth of Yangon as the periphery continues to be populated.

Socially and Economically there are systems in place for renting and purchase of land which can be build upon as precedences for obtaining a lease agreement with the Government.

HOLDINGS

<p>Option 1: Giving 400,000MMK to the ward governor and community elders to cover cost of land rental. Eventually the land becomes owned by the payee.</p>	<p>Option 2: Giving 5,000MMK regularly to the Ward Governor and community elders till land becomes owned.</p>
---	--

DIRECT HOUSE OWNERSHIP

Buying land and houses outright from the holdings by paying between 400,000MMK - 2,000,000MMK

Average price for LAND leasing to ownership: 400,000MMK

Fig. 5.14 - Possibilities of Agreements

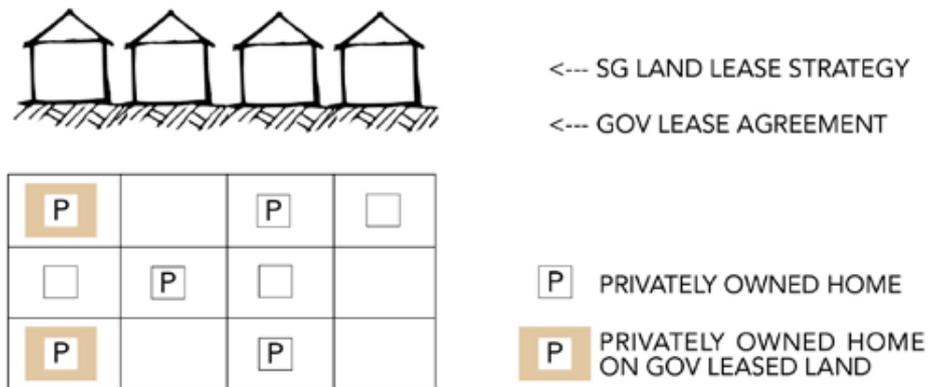


Fig. 5.15 - Land Lease Scheme

EXISTING BASIS FOR COMING UP WITH THIS STRATEGY

The population of households occupying the land of Ward 67 has been increasing from the following figures:

2008: 1007 HH

2014: 3000 HH

2018: 4100 HH

Despite the risk of eviction, citizens marginalised by lack of governmental housing policies end up only being able to afford land and rent in a settlement as Ward 67 and all across Yangon.

Though the land is government-owned, there is a presence of informal landowners renting out and selling out land to residents. These transactions show the willingness of citizens to obtain legal tenure that's affordable within their means.

However these funds never reach the the government, for tax purposes and redistribution of finances.

STRATEGIC PROPOSAL

With 410,000 HH, land value is estimated as: 10,640,000,000,000 Kyat

Given the amount saved from the collaborative water supply per household, 11,000 Kyat can be reinvested in the strategy to obtain an official lease agreement from the city government. (See Strategy 2)

1 month savings on water
 11,000 Kyat saved
 410,000 HH
 451 Million Kyat

DURATION OF OBTAINING THE LEASE ON MONTHLY SAVINGS: 24 months.

IMPLEMENTATION PROCESS, ACTORS INVOLVED & TASKS

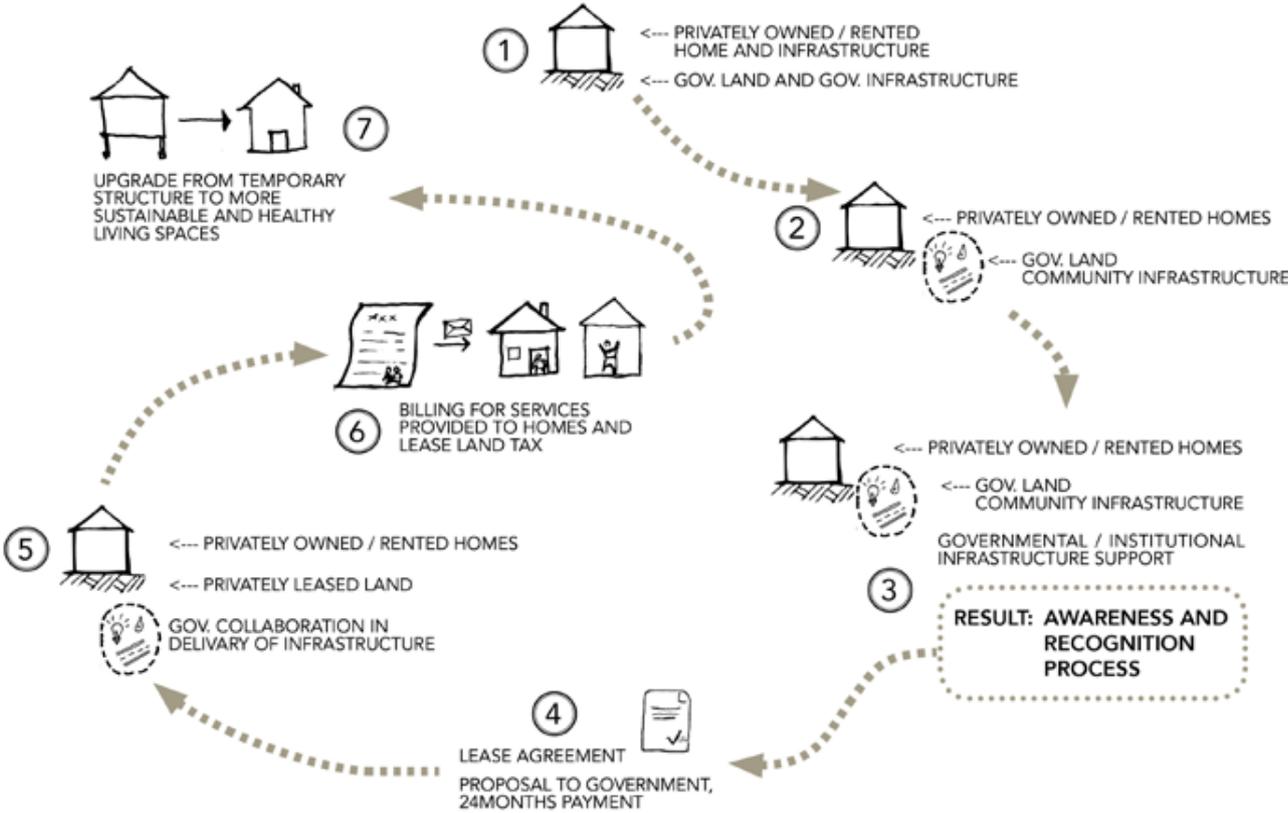


Fig. 5.16 - Process of Implementation

BENEFITS & OPPORTUNITIES

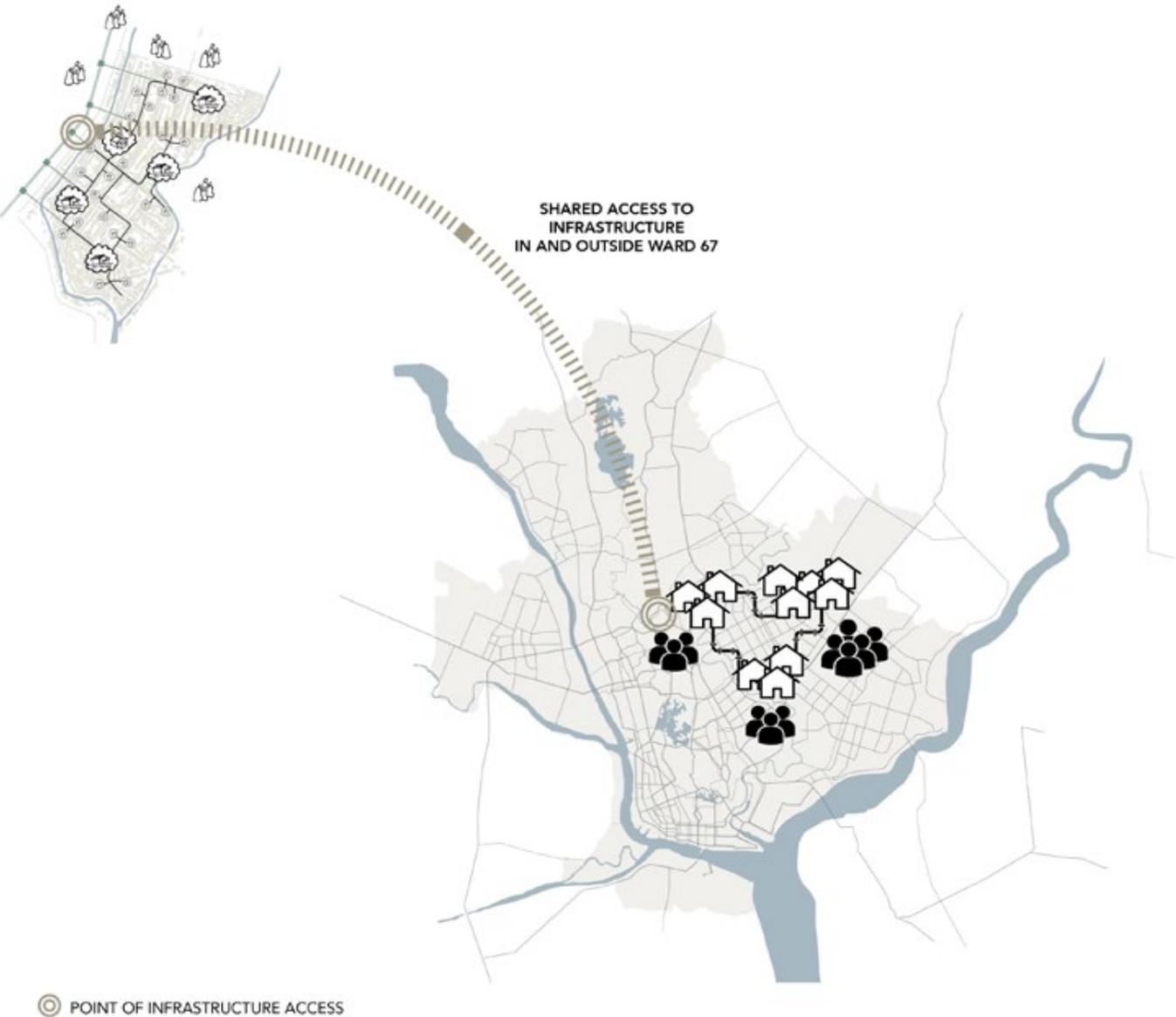


Fig. 5.17 - Implementation Benefits

5.6 Collaborative Upgrading as a Solution?

The strategies proposed are built on the existing systems in Ward 67 and they exist across all informal settlements in various manners.

These systems lay a physical, social and economical foundation for transformation which need to be recognized for citywide development. In the same way that collaborative water systems can influence recognition, redistribution, upgrading and land tenure, so can other modes of infrastructure upgrading be used across settlements to achieve similar aims.

From the model of the savings group as social infrastructure, to collaborative investments in physical infrastructure, settlements as Ward 67 can become sources of contribution to city wide development as opposed to burdens. Recalibration of direction of social and economical investments is key for upgrading and security to be achieved. As we have shown here, it is through working from the existing 'informalised' housing and upgradation processes that we could achieve an integrated and diverse city, that meets the fast growing needs of its population.

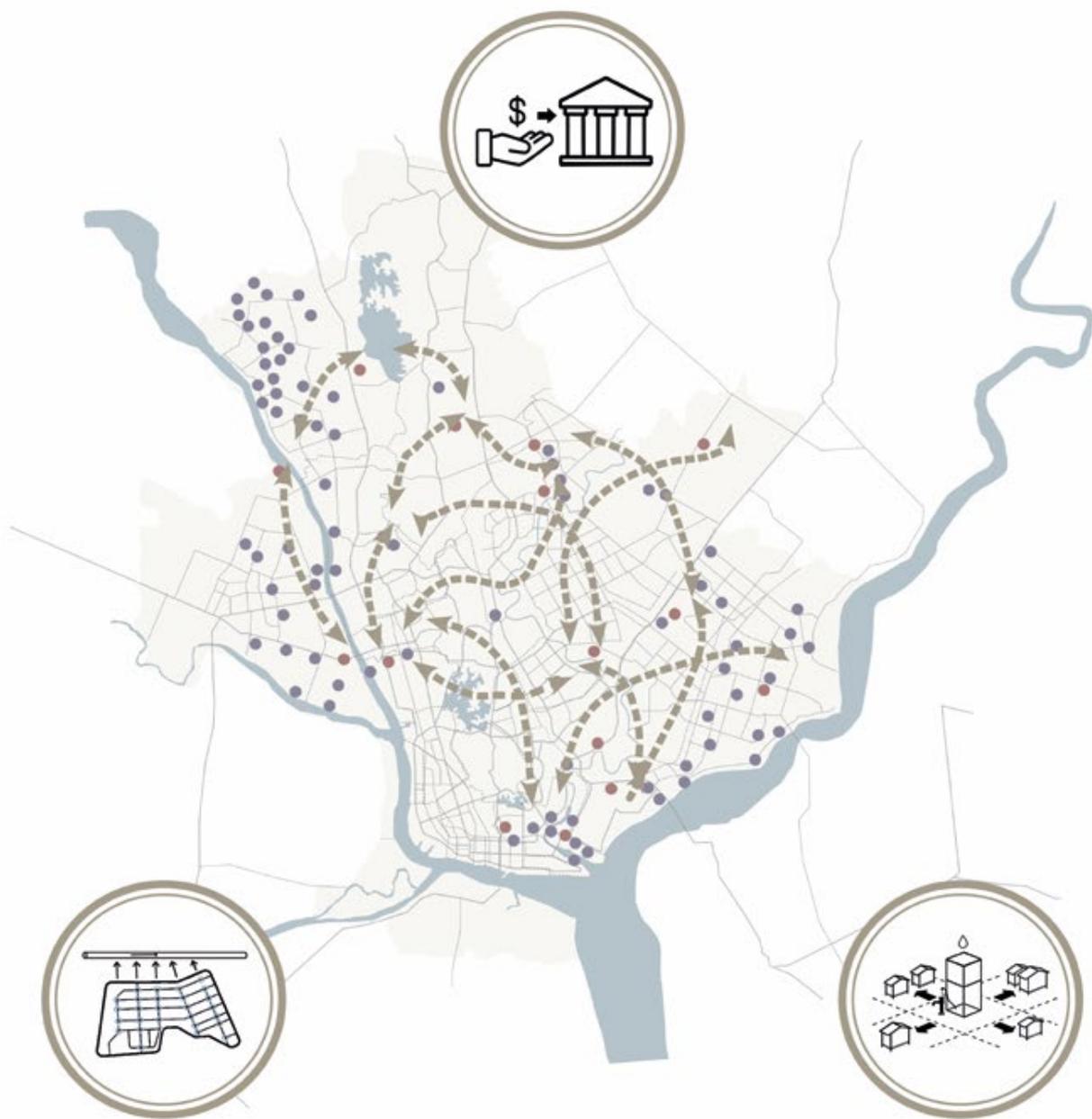


Fig. 5.18 - Map of Implementation



Fig. 6.0 - Workshop Participants outside the Monastery in Ward 67



6.0 Conclusion

The omnipresent drive hidden behind this study was the common will to contribute to a relevant discussion around the dynamics taking place in Yangon in this particular moment of transformation in transition. The country still faces some of its biggest **challenges** while opening its windows and doors and exposing some of its greatest potentials and **opportunities**. The initiatives to develop new plans can be seen as evidence of the **political will** that is driving the country through its new pathway. However, a major part of the population is left out of this process. When it comes to planning some of the main economic goals seem to overshadow its **social impacts** and are disconnected from the **multiplicity of housing processes** that are shaping the cities. The assumed Housing Crisis is in part the result of the state perspective, discourse, and positionality around alternative housing processes, including the **un-acknowledgement of informal settlements**. We hope this research brings to light relevant information that might contribute to the discussion around informality and how it is perceived. It is fundamental to listen and plan according to the narratives of the communities living in the urban peripheries, taking into account the issues, as well as understanding the **social, political and economic capital** they preserve.

We actively engaged in constructive community discussions by sharing small scale upgrading strategies at ward scale, while at the same time our aim was looking into larger and longer term plans. Our final strategies are grounded on the intention to **improve everyday life** through communal action without losing sight of the pathway towards tenure security. Infrastructure interlinks people and places and can be used as an entry-point with small interventions at community scale working as catalysts for bigger initiatives developed in collaboration with the State. We believe that **collaboration is vital**, especially when all actors are already working separately to achieve the same goals.



Fig. 7.0 - Workshop Participants inside Community Centre in Pyit Taing Taung



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- AlSayyad, N. (n.d.). Urban Informality as a "New" Way of Life. In A. Roy, Urban Informality: Transnational Perspectives from the Middle East, South Asia and Latin America (Vol. Volume 1). Lanham, Maryland, USA: Lexington Books.
- Asian Coalition for Housing Rights. (2008, September). a conversation about upgrading a Bang Bua. 1-10.
- Asian Coalition for Housing Rights. (2013, August). Housing by People in Asia. Newsletter of the Asian Coalition for Housing Rights(No. 18), 1-28.
- Asian Coalition for Housing Rights. (2017, June). Community Finance in Five Asian Countries. Community Finance Study, 1-72.
- Asian Development Bank. (2013). Myanmar, Urban Development and water Sector Assessment, Strategy, and Road Map. Manila, Philippines.
- Boonyabancha, S. (2005). Baan Mankong: going to scale with "slum" and squatter upgrading in Thailand. Environment & Urbanization, Volume 17(No. 1), 21-46.
- Boonyabancha, S. (2009). Land for housing the poor - by the poor: experiences from the Baan Mankong nationwide programme in Thailand. Environment & Urbanization, Volume 21(No. 2), 309-329.
- BUDD UCL. (February 2018). BUDD Fieldtrip Project 2018, Yangon Myanmar: Transformation in a time of Transition, February - June 2018. London, UK.
- Community Architects Network. (2018). Presentation: CAN. presented at YTU, Workshop - Yangon, Transformation in a time of Transition, May 2018.
- Daw Mie Tin, Director of HDD, DUHD, MOC. (May 2018). Presentation: Housing Policy and Supply Plan of Department of Urban and Housing Development. presented at YTU, Workshop - Yangon, Transformation in a time of Transition, May 2018. Yangon, Myanmar.
- Department of Population Ministry of Immigration and Population. (2015). The 2014 Myanmar Population and Housing Census, Yangon Region. Census Report Volume 3 - L, Nay Pyi Taw, Myanmar.
- Department of Population, Ministry of Labour Immigration and Population. (2017). The 2014 Myanmar Population and Housing Census, Yangon Region, Eastern District, Dagon Myothit (Seikkan) Township Report. Nay Pyi Taw, Myanmar.

Dovey, K. (2015). Sustainable informal Settlements? *Procedia Social and Behavioral Sciences*, Volume 179(International Conference Green Architecture for Sustainable Living and Environment (GASLE) 2014), 5-13.

Dr. Hiroto IZUMI, Special Advisor of the Prime Minister. (2017). Presentation: Japan's Cooperation for Urban Development in Myanmar. Japan-Myanmar Seminar for Urban Development and Housing 2017.

Forbes, E. I. (2016). On the Frontier of Urbanization: Informal Settlements in Yangon, Myanmar. In *Independent Journal of Burmese Scholarship* (Vol. Volume 1, pp. 197-238). Yangon, Myanmar: Pansodan Books.

JICA. (March 2014). Preparatory Survey Report on the Project for Improvement of Water Supply, Sewerage and Drainage System in Yangon City in The Republic of The Union of Myanmar. Volume IV, Water Supply System Feasibility Study, Advance Version, JICA, YCDC.

JICA. (May 2018). Presentation: The Project for Updating the Strategic Urban Development Plan of Greater Yangon in the Republic of the Union of Myanmar, Draft Summary from February 2017. presented at YTU, Workshop - Yangon, Transformation in a time of Transition, May 2018. Yangon, Myanmar.

JICA Study Team. (May 2018). Presentation: Updating the Urban Transport Development Plan in Greater Yangon, Summary of the Study. presented at YTU, Workshop - Yangon, Transformation in a time of Transition, May 2018. Yangon, Myanmar.

JICA, YCDC. (April 2013). A Strategic Urban Development Plan of Greater Yangon. Final Report 1, Part 2: The Master Plan, The Republic of the Union of Myanmar.

JICA, YCDC. (April 2013). A Strategic Urban Development Plan of Greater Yangon. Final Report 1, Part-1: The Current Conditions, The Republic of the Union of Myanmar.

JICA, YCDC. (January 2014). A Strategic Urban Development Plan of Greater Yangon. Final Report 2.

Lachlan McDonald and Arkar Hein, Renaissance Institute. (2017). Presentation: Managing the challenges of rapid urbanization: A review of the existing property tax system in Myanmar.

Lall, M. (2017). Presentation: Myanmar - Peace prospects and reform challenges. UCL, London.

LSE. (n.d.). Towards Urban Growth, Analytics for Yangon, A comparative information base for strategic spatial development. An LSE exploratory report commissioned by the Myanmar Country Office of the International Growth Centre, London, UK.

- Marx, C. (2009). Conceptualising the potential of informal land markets to reduce urban poverty. *International Development Planning Review*, Volume 31(No. 4), 335-353.
- McFarlane, C. (2012). Rethinking informality: Politics, Crisis, and the City. *Planning Theory & Practice*, Volume 13(No. 1), 89-108.
- McFarlane, C., & Waibel, M. (2012). Introduction, The Informal-Formal Divide in Context. In *Urban Informalities: reflections on the formal and informal* (Vol. 1). Farnham: Ashgate.
- McLeod, R. (2011). Building effective relationships between the urban poor and Government. *Comic Relief Literature Review, People living in urban slums international grants programme*, 1-42.
- Roberts, J. L. (May 2018). Presentation: Nalehmu-Myanmar's common practice of everyday politics. presented at YTU, Workshop - Yangon, Transformation in a time of Transition, May 2018. Yangon, Myanmar.
- Roy, A. (2005). Urban Informality, Toward an Epistemology of Planning. *Journal of the American Planning Association*, Volume 71(No. 2), 147-158.
- Saw, Kyi Pyar Chit; Arnold, Mathew, MDRI, The Asia Foundation. (2014). Discussion Paper No.6: Administering the State in Myanmar, An Overview of the General Administration Department. *Subnational Governance in Myanmar Discussion Paper Series*, pp. 1-52.
- Saw, Kyi Pyar Chit; Arnold, Mathew; Joeline, Cindy; Lynn, Aung Thet, MDRI, The Asia Foundation. (2013). *State and Region Governments in Myanmar*. pp. 1-98.
- Saw, Kyi Pyar Chit; Arnold, Mathew; Kempel, Susanne; Aung, Thu Ye, MDRI, The Asia Foundation. (2015). Discussion Paper No. 7: Municipal Governance in Myanmar, An Overview of Development Affairs Organizations. pp. 1-69.
- Sheehan, S. (2014). *Yangon Real Estate Market and Heritage Property Survey*. Prepared for Yangon Heritage Trust, assistance by the EU.
- Simone, A. M. (2004). People as Infrastructure: Intersecting Fragments in Johannesburg. *Public Culture*, Volume 16(No. 3), 407-429.
- The Republic of the Union of Myanmar. (17-20 October 2016). National Habitat Report, The Republic of the Union of Myanmar. The United Nations Conference on Housing and Sustainable Urban Development, (pp. 1-41). Quito, Ecuador.

Thida, Moe, Deputy Director, DUHD. (2017). Presentation: Myanmar Urban Development and Investment Opportunities. Nay Pyi Taw, Myanmar.

Turner, J. (1968). Uncontrolled Urban Settlement: Problems and Policies. Urbanization: development policies and planning, International social development review, Volume 1(No. 1), 107-128.

Turner, J. F. (1972). Housing as a Verb. In Freedom to Build, dweller control of the housing process (pp. 148-175). New York, USA: Collier Macmillan.

UNDP. (n.d.). Local Governance Mapping, The State of Local Governance: Trends in Yangon.

UN-Habitat. (2016). Guidelines for Urban Planning, prepared for the Republic of Myanmar. Report, Nairobi, Kenya.

UN-Habitat. (2018, May). UN-Habitat. Retrieved from International Experience-Sharing Workshop on Slum Upgrading: <http://unhabitat.org.mm/news/international-experience-sharing-workshop-on-slum-upgrading/>

WFP, UNICEF, UN-Habitat. (2014). Urban Poverty in Yangon Greater City, A qualitative study of urban poverty, its causes and consequences.

WFW. (2018). BUDD Fieldtrip Project expectations.

WFW. (2018). WFW Ward 67 BUDD Fieldtrip Brief.

Yangon City Development Committee. (n.d.). Facts about YCDC Yangon City Development Committee.





8.0 Appendix

8.1 Evolution of Analytical Framework

In the pre-fieldtrip stage a surface level attempt was made to understand the Urban transformation of Yangon and identify the core issue at hand through time. Through time as a lens of analysis, Yangon was understood to have continually been in transition since the TOUNGOO DYNASTY in 1500 whilst having different moments of intense transformation due to politics, economies and social influences internally and externally. As a result birthing a nation and a city with a recent shift in political control, perceived political freedom, civil unrest and increased tension within the ethnic groups and external foreign investment that brings rapid change.

Building on the first strike we discovered time to be the container through which the three different modes of transition in Yangon have taken place; Political, Economical and Social. Through these modes of Transitions, a further understanding was discovered as the drivers of transition became more explicit in the spheres of transformation namely; land, citizenship and finance. These spheres of transformation were evident in urban challenges of Ward 67 due to lack of tenure, lack of citizen rights to public services, financial limitations to level of jobs attainable, lack of access to public educational and health facilities. It was evident, the core issue at hand was "a lack of recognition of the informal".

Hence, due to several causes in these modes and spheres of transition and transformation, our proposal was to investigate WHAT EXISTING 'FORMAL-INFORMAL' PRACTICES CAN CONTRIBUTE TO RECOGNITION THROUGH THE UPGRADING OF INFRASTRUCTURE? Exploring the grey area between both formal and informal practices as a room for manoeuvre and opportunity to attain recognition.

From the onset of the fieldwork and engagement with the respective partners, this framework transformed from the Political, Economical and Social transitional modes to more grounded human modes of impact identified as Physical, Economical and Social modes within which any form of transformation can take place in land, citizenship and finance. The Political transition was not neglected, but became more refined into governmental policies and institutions binding all the modes of transition and spheres of transformation together.

However, the Political became more vivid through the absence of policies and structures catering to the lower class and poorer levels of society.

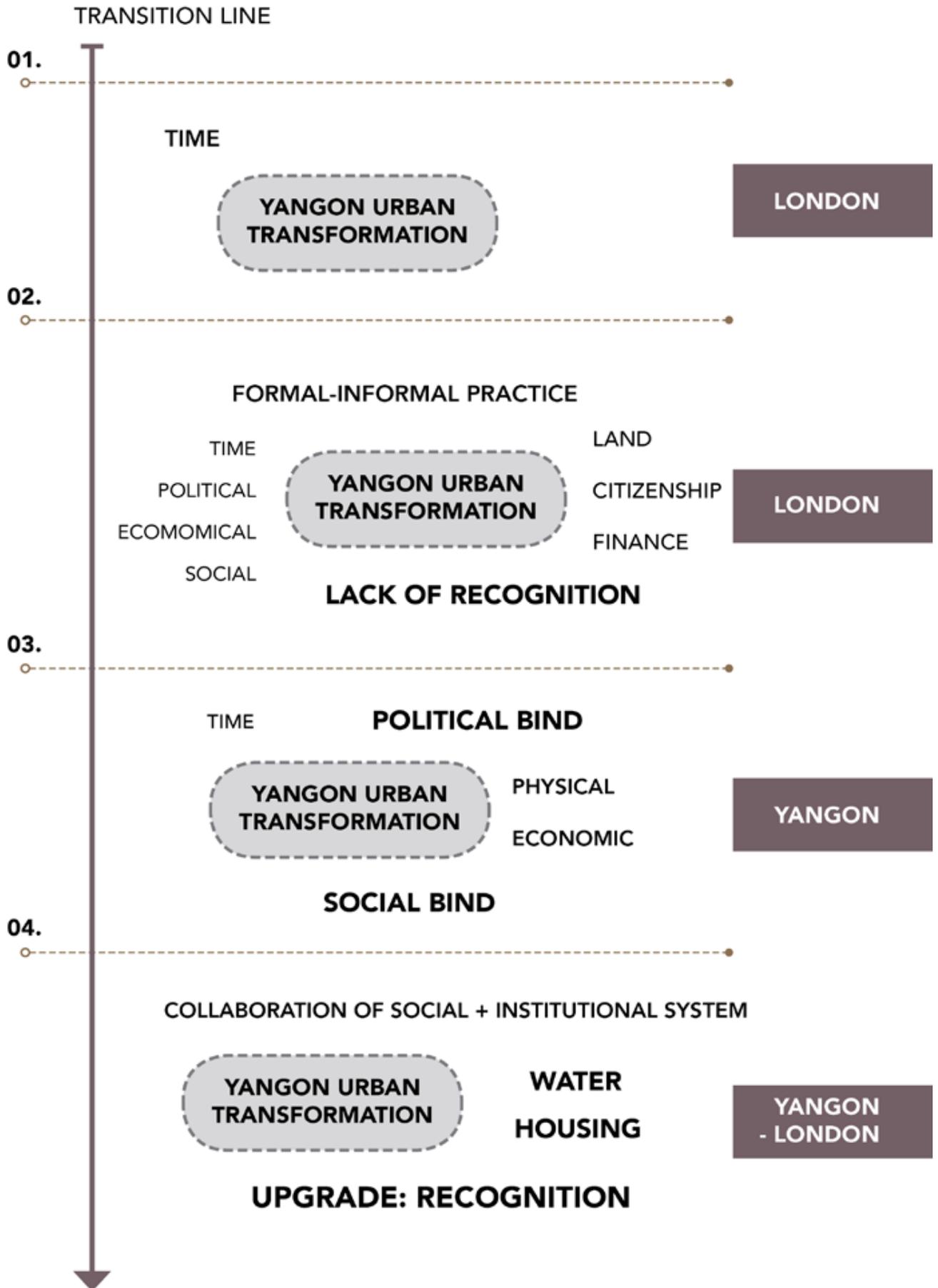
Also through the material and discursive practices on ground in Ward 67 pertaining to land, citizenship and finance it became clearer that "NAHLEMU" (which means an understanding) played a major role processes of transformation and recognition. Residents became collaborators without any legal agreements but social agreements.

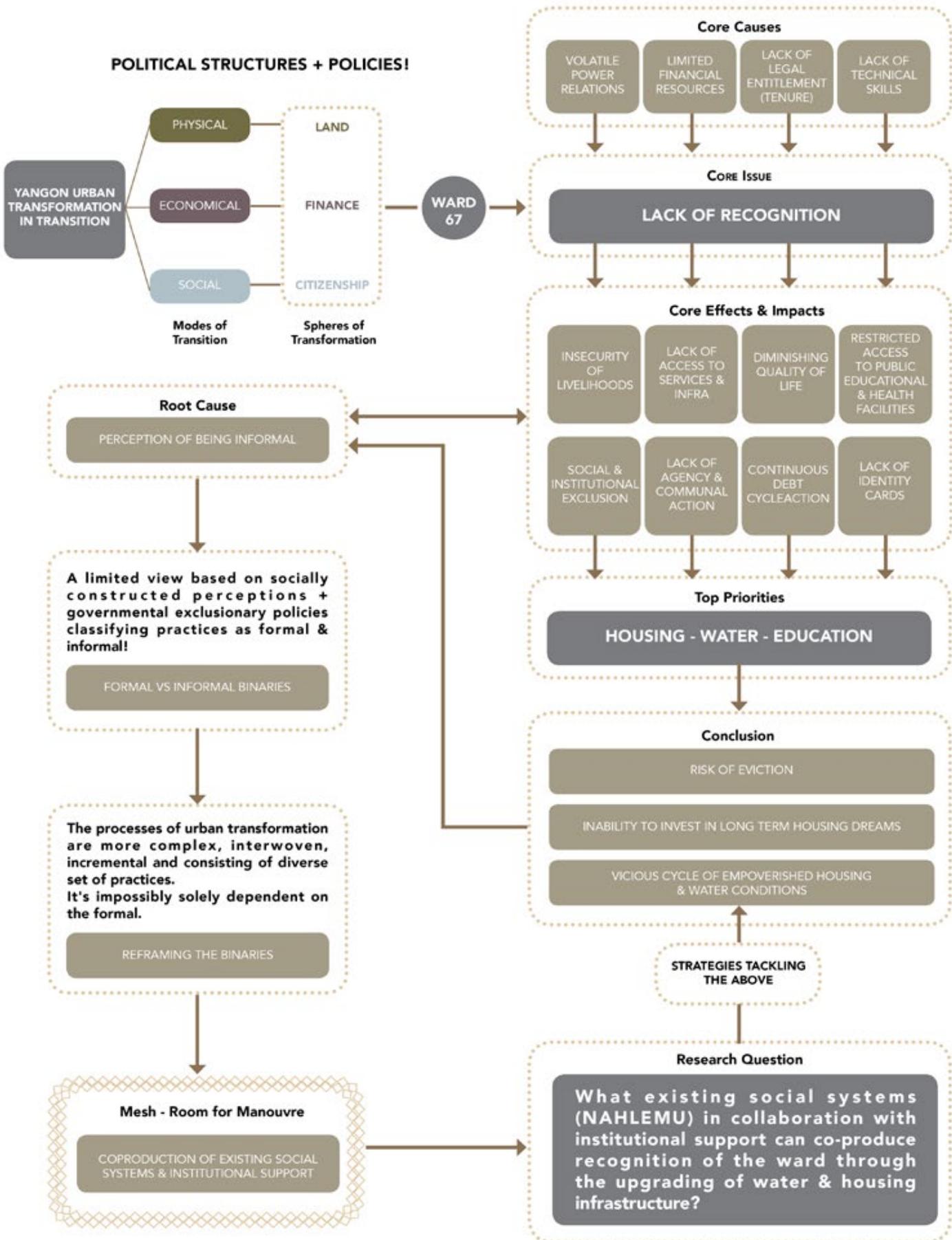
This led to a further refinement of the framework and perception of existing systems in Yangon.

Building on this, the final strike was the refinement of the entry point that would lead to recognition. What infrastructure? What upgrade? What formal-informal practices?

Through understanding the priorities of the communities to be water and housing, upgrade to be in terms of the quality of and improved access to physical infrastructures and formal-informal practices to be the existing social systems on ground level, the framework of our analysis was then remodelled with consideration of the necessity for institutional collaboration as follows:

WHAT EXISTING SOCIAL SYSTEMS (NAHLEMU) IN COLLABORATION WITH INSTITUTIONAL SUPPORT CAN CONTRIBUTE TO RECOGNITION OF INFORMAL SETTLEMENTS THROUGH THE UPGRADING OF WATER & HOUSING INFRASTRUCTURE?





Types of Transitions

Political Transition



The interval between one political regime and another. In this sense political transition is also political transformation. It starts from a given political regime, usually an authoritarian one, which for many reasons becomes inadequate or unable to live up to its institutional tasks, and culminates in another constituting a break-through in the past political life of a country.

Economic Transition



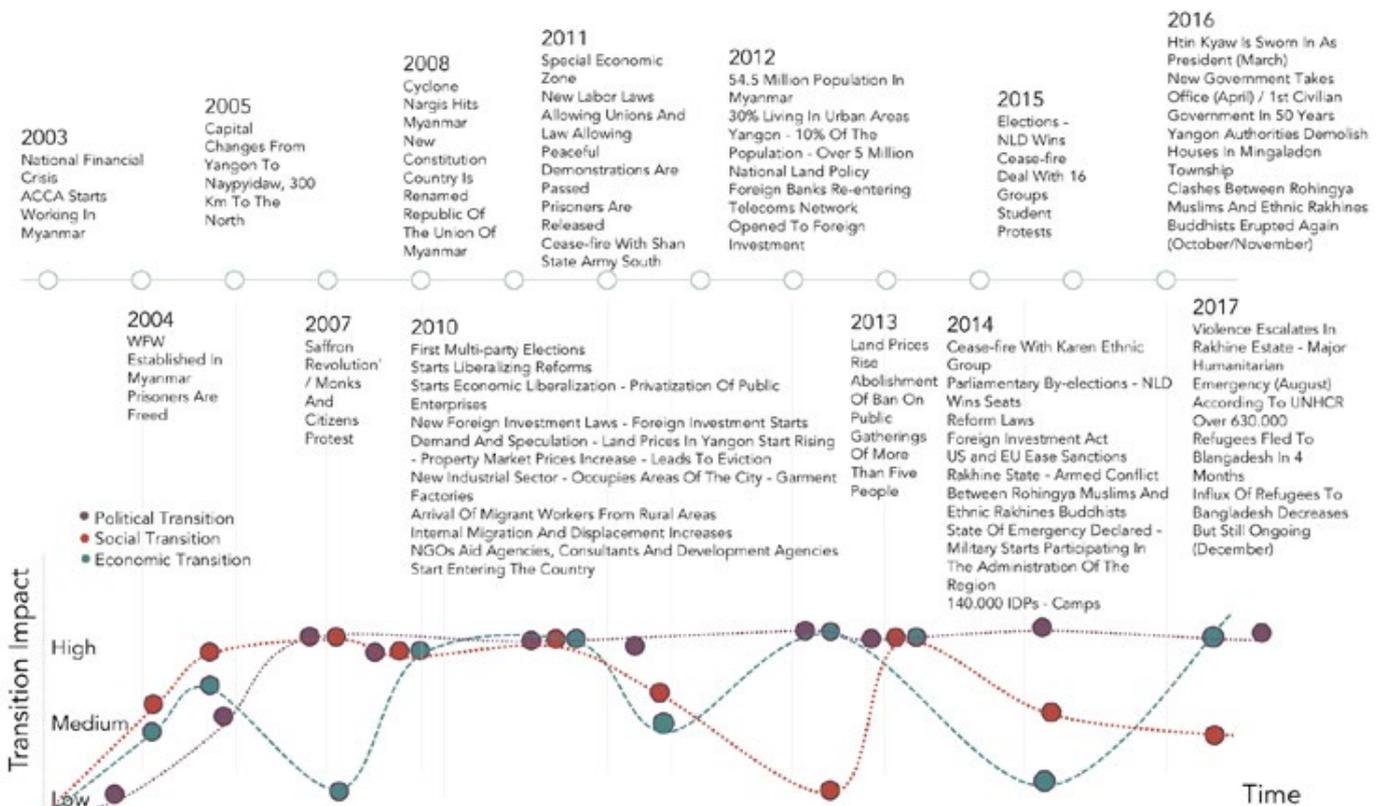
The interval between a more centrally planned socialist economy into a form of market economy that's driven by capital.

Social Transition



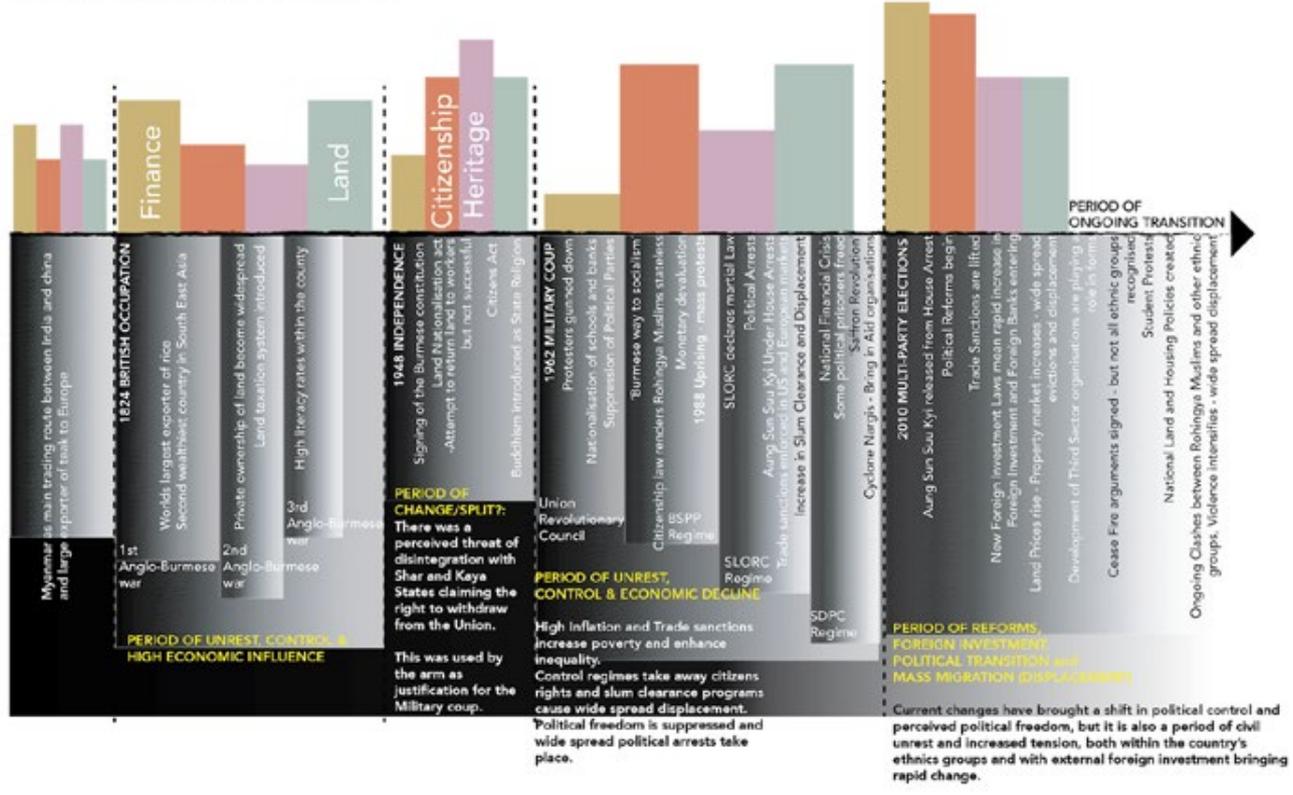
Social changes are variations from the accepted modes of life; whether due to alteration in geographical conditions, in cultural equipment, composition of the population or ideologies and whether brought about by diffusion or inventions within the group

Timeline & Level of Impact

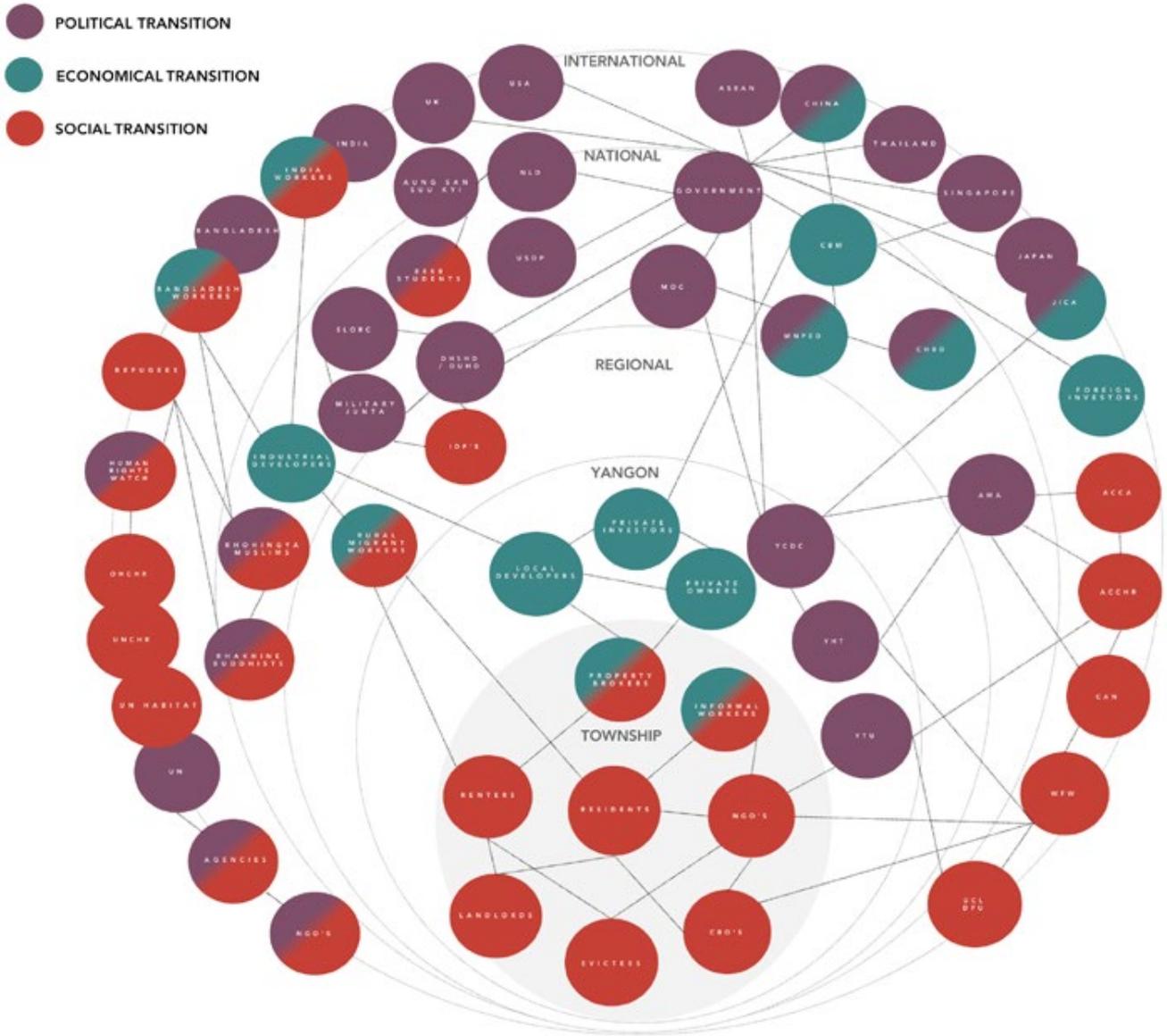


8.2 Diagram of Time-line: Transformation in Transition

Transformation IN Transition

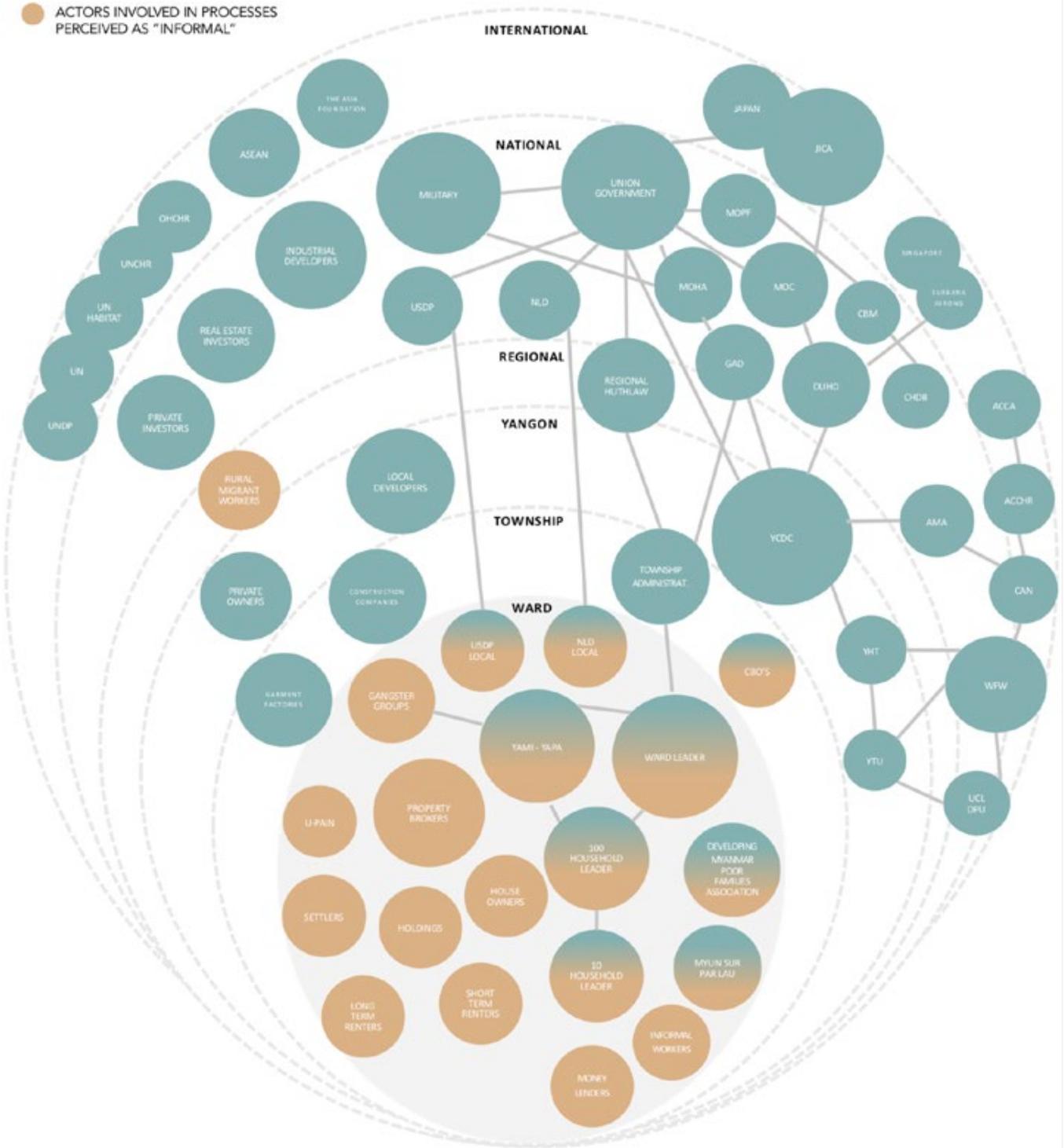


8.3 Diagram of Actors in Transition

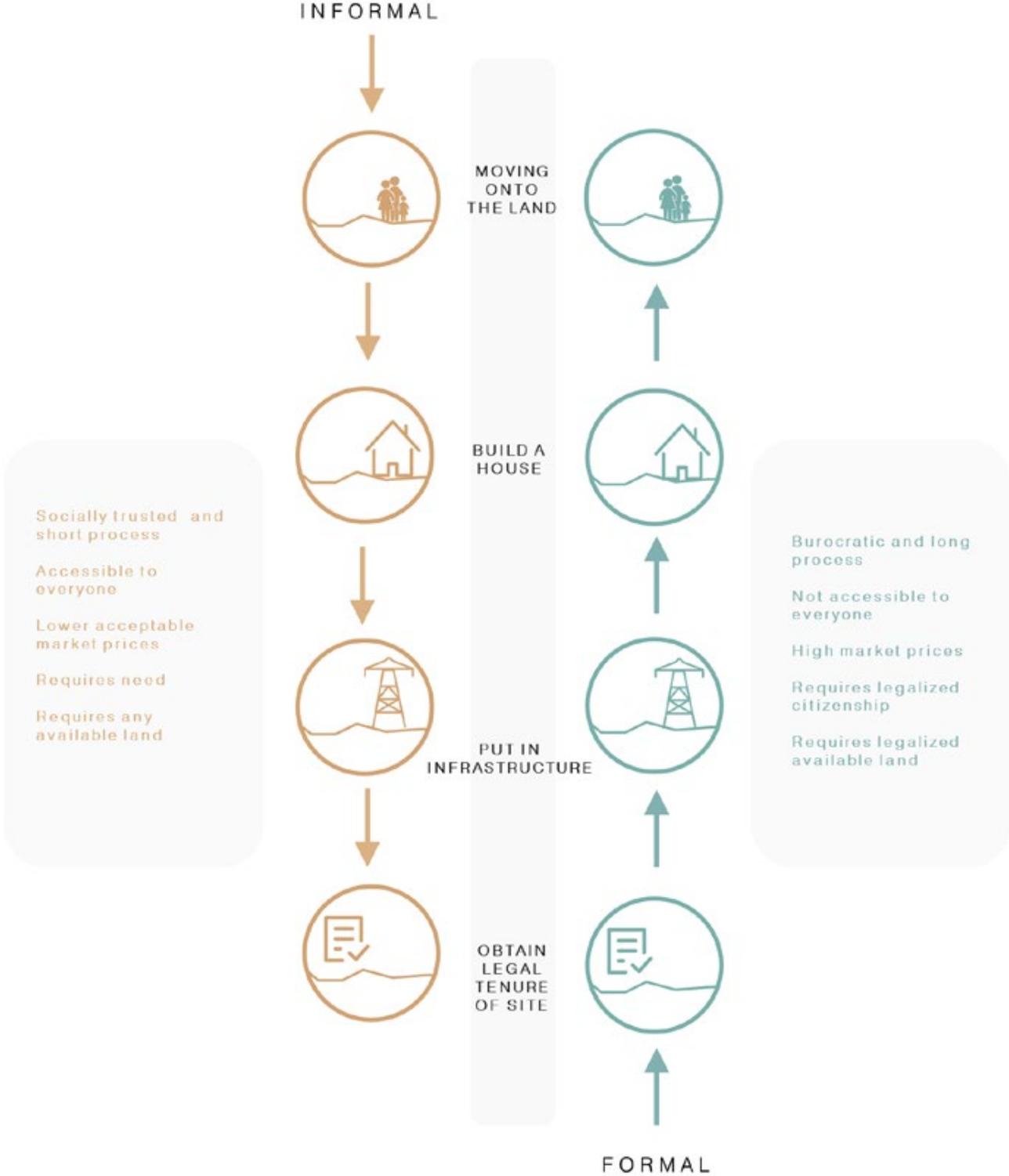


8.4 Diagram of Actors

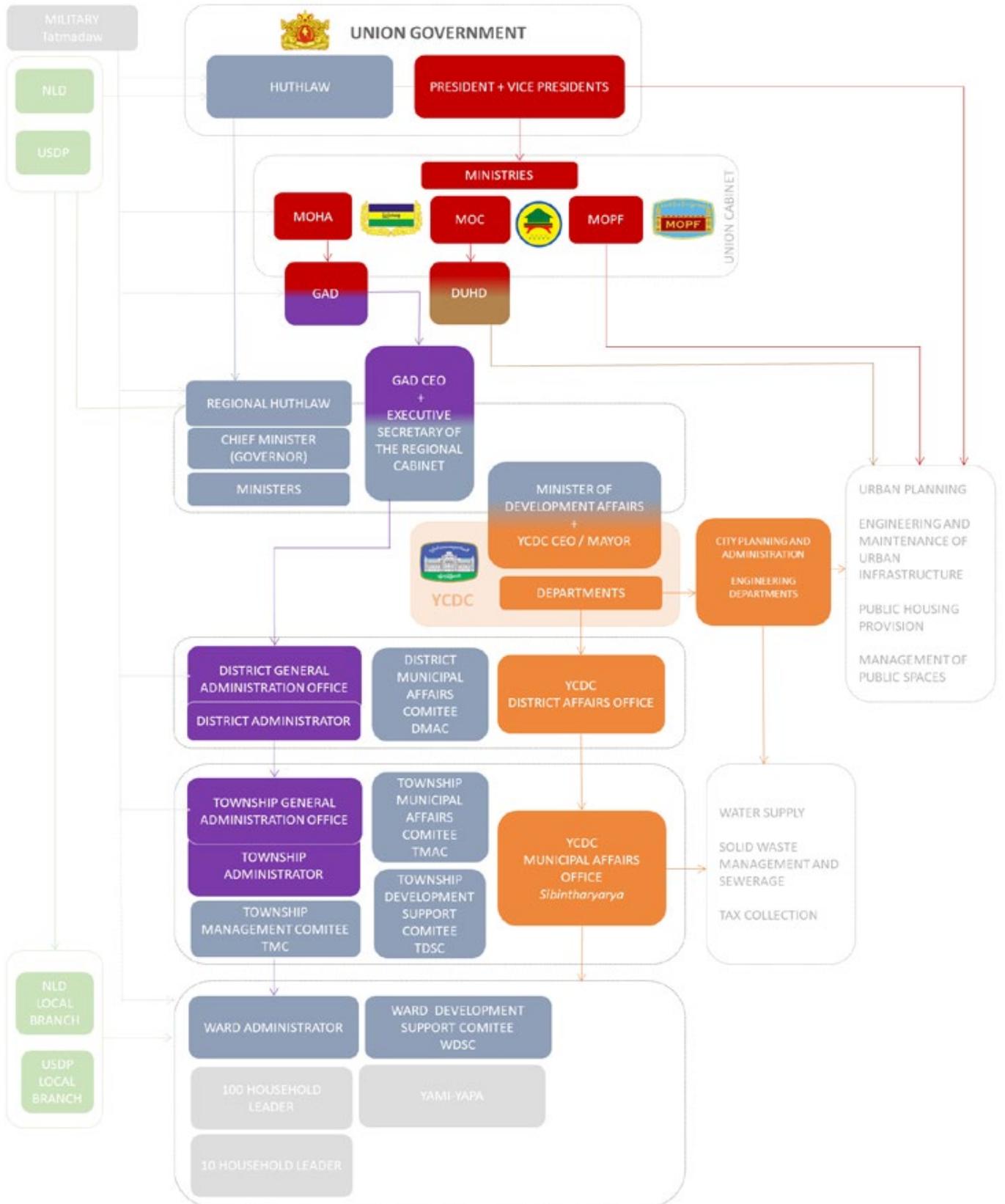
- ACTORS INVOLVED IN PROCESSES PERCEIVED AS "FORMAL"
- ACTORS INVOLVED IN PROCESSES PERCEIVED AS "INFORMAL"



8.5 Housing Processes



8.7 Governance Structure



8.8 More Methods used



Ice-Breaking activities

Observing the processes used by WFW to create an atmosphere of trust and friendship helped us to frame our interaction with community members. These activities were initiated at the beginning of each day and involved both team-work and physical contact, helping to break down barriers between researchers and community members.



Transect walk

Through the transect walk we were able to observe, and talk to residents, about the key issues around infrastructure, as well as gain an understanding of processes of upgrading that are currently being used. From this walk we began to determine our initial list of priorities, within infrastructure, on which we should focus on.



Co-Design for Strategies

On the last day of fieldwork we worked with community members to look at possible solutions to some of the issues around housing and water that they had brought up. We then used these ideas to inform our community level strategies. However, due to time, the ideas from this workshop were not developed enough to take forward on their own.



Interviews

To understand the specific practices at play we conducted interviews with both residents and Ward Leaders who play an important roles both within service provision and upgrading. Within service upgrading this included the 1:10 and 1:100 leaders and wealthy material benefactors.



Case Studies

When looking at housing upgrading we spoke to residents who had recently upgraded their houses this included Daw Tin and U Ohn Shwe, community members with whom we were working, who had recently upgraded their houses. Alongside this we spoke to Daw Thida & U Thein Lwin, who had re-built their home in brick after 2 years of living in a bamboo hut.



Youth Exercises

The majority of community members we were working with were middle aged mothers. In order to try and gain a different perspective we worked with children on the ward on various activities to understand how the issues around water and housing effected them. These included drawing their dream house, drawing the different ways they use water and interviews.



8.9 Social Findings

The Monastery:

The monastery is the main space for school for young children. Alongside this, they play an important cultural role with Buddhism being ingrained within everyday life in the ward.

Funeral Services:

Myint Zu Par La is a funerary service institution based in Ward 67, acting as an important solidarity network. Moreover, they support the community through a voluntary waste collection system. Volunteers collect waste from households and separate the plastic bottles to sell. The money received from this collective voluntary initiative has already allowed them to buy large waste bins that are placed in the streets.

Social Connection exploration

In order to get a conversation flowing, this exercise started off with both community members and students listing qualities they look for in a friend. There were many overlapping words written, the most common being; trusting, loyal, understanding, and sympathetic. From the ensuing conversation, one common struggle the community members had shared was the difficulty in making close friends they could rely on when they first settled into the Ward. This paved way for the main part of the exercise which looked into the spaces where members of the community came together, or rather, where social networks form. Through conversation and storytelling, several frequently mentioned places of social encounter were religious and national festivities, along with sports events for children. One main concern with these spaces was that they were temporary events. The only consistent, non-temporary space was the savings groups, which only a few of the community members present were a part of.

WFW model

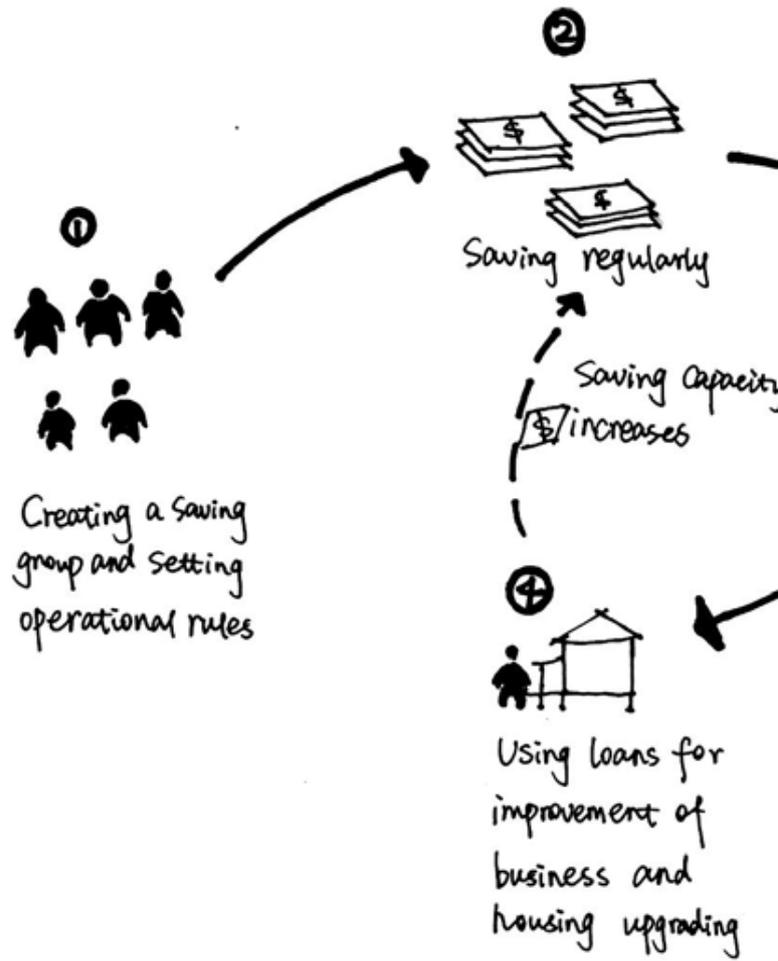
In Yangon, WFW has been supporting communities in informal settlements through a collaborative approach, by creating self-managed women's savings groups and providing training. The savings groups members agree collectively on their own set of rules to guide their operation, defining roles and deciding on how to manage the savings. Some of the results have been the overall improvement of livelihoods through loans for small businesses at low interest rates, or for incremental upgrading of housing conditions. In some cases there is also support to develop new housing communities by providing loans to buy new land collectively and create new neighbourhoods through collective planning and the creation of a housing committee.



Street in Pyit Taing Taung

Benefits of the Process

- Improves leadership skills
- Improves financial management skills
- Helps end debt cycle
- Builds trust
- Team work
- Transparency
- Accountability
- Literacy



No	Date	Amount (Rp)	Total (Rp)
0		0000	000000
1	17-1-17	3000	330000
2	17-1-17	3000	360000
3	17-1-17	3000	390000
4	17-1-17	3000	420000
5	17-1-17	3000	450000
6	17-1-17	3000	480000
7	17-1-17	3000	510000
8	17-1-17	3000	540000
9	17-1-17	3000	570000
10	17-1-17	3000	600000
11	17-1-17	3000	630000
12	17-1-17	3000	660000
13	17-1-17	3000	690000
14	17-1-17	3000	720000
15	17-1-17	3000	750000
16	17-1-17	3000	780000
17	17-1-17	3000	810000
18	17-1-17	3000	840000

Savings Groups Members in Pyit Taing Taung



Savings Groups Members in Pyit Taing Taung

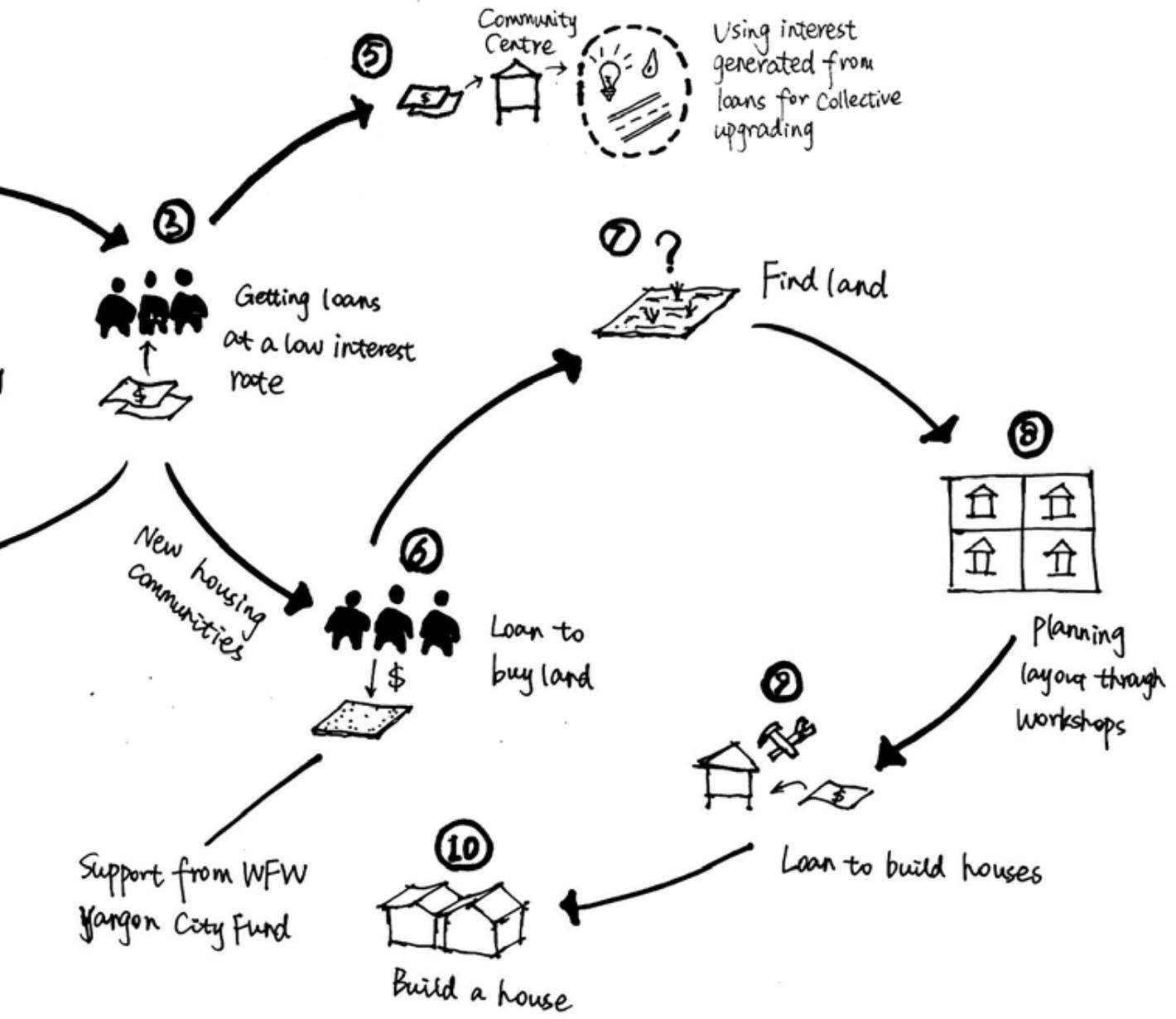


Fig. 4.3 - WFW Savings Groups Process



8.10 Water Statistics

General

100.000 - to build a well - only labour - excluding material
 40.000 - to buy an electric 2 inches perimeter water pump
 400 - 700 - to fill a 100 L plastic tank with bathing/washing water
 30.000 - to buy 100 L plastic tank

A House of 6 people - 2 tanks - pay 800 to fill the 2 tanks - they fill the tanks 3 times a week and pay at the end of the week.

Costs per week (fresh water): 2400kyat/week | 9600kyat/month/

Drinking water is delivered in the houses 2 times a day

Rainwater is collected in rainy season but after stored for 2 days starts smelling bad

A house of 11 people - 1400kyat for two days fresh water and 400kyat per 2days for drinking water

Costs for fresh water): 4200kyat/week | 16800kyat/month

Costs for drinking water): 1200kyat/week | 4800kyat/month

Average fresh water costs for average household of 5 people: 2900kyat/week | 11600kayt/month

Average drinking water costs: 1200kyat/week | 4800kyat/month

Building a normal Bamboo house: 200.000kyat

Sellers:

Electric generator to make pump work and sell electricity - 1 gallon of diesel a day - 3.300 a day for diesel (some sellers have 3 generators and 5 wells)

Sellers distribute water to the fixed pipes in alternate days (monday, wednesday, friday etc..)

Fixed pipes break easily with the movement of cars and cycles and in the rainy season might get contaminated by the dirty waters

Sellers fix the damaged pipes regularly, is part of the service, older pipes break more easily than new ones, new ones are fixed faster by the sellers



8.11 Daw Kyi Thi Kyi's water story

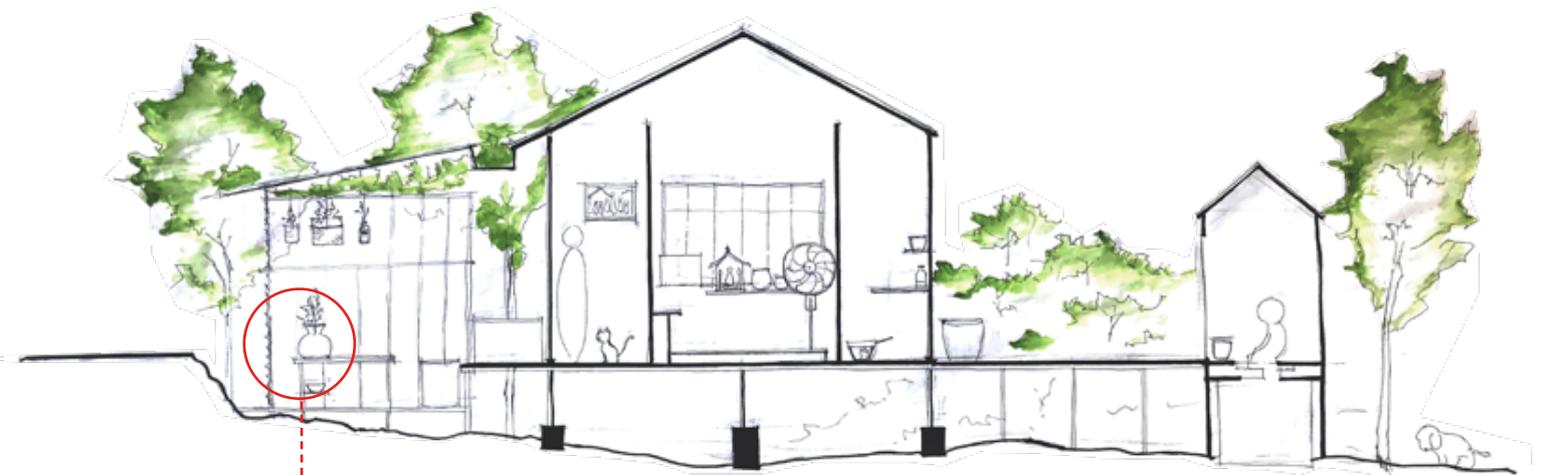
3 people living in house
Pays rent approx. 35.000 a month (renting for 5 years)

She works in the market selling, brother also sells in the market and niece works in a factory

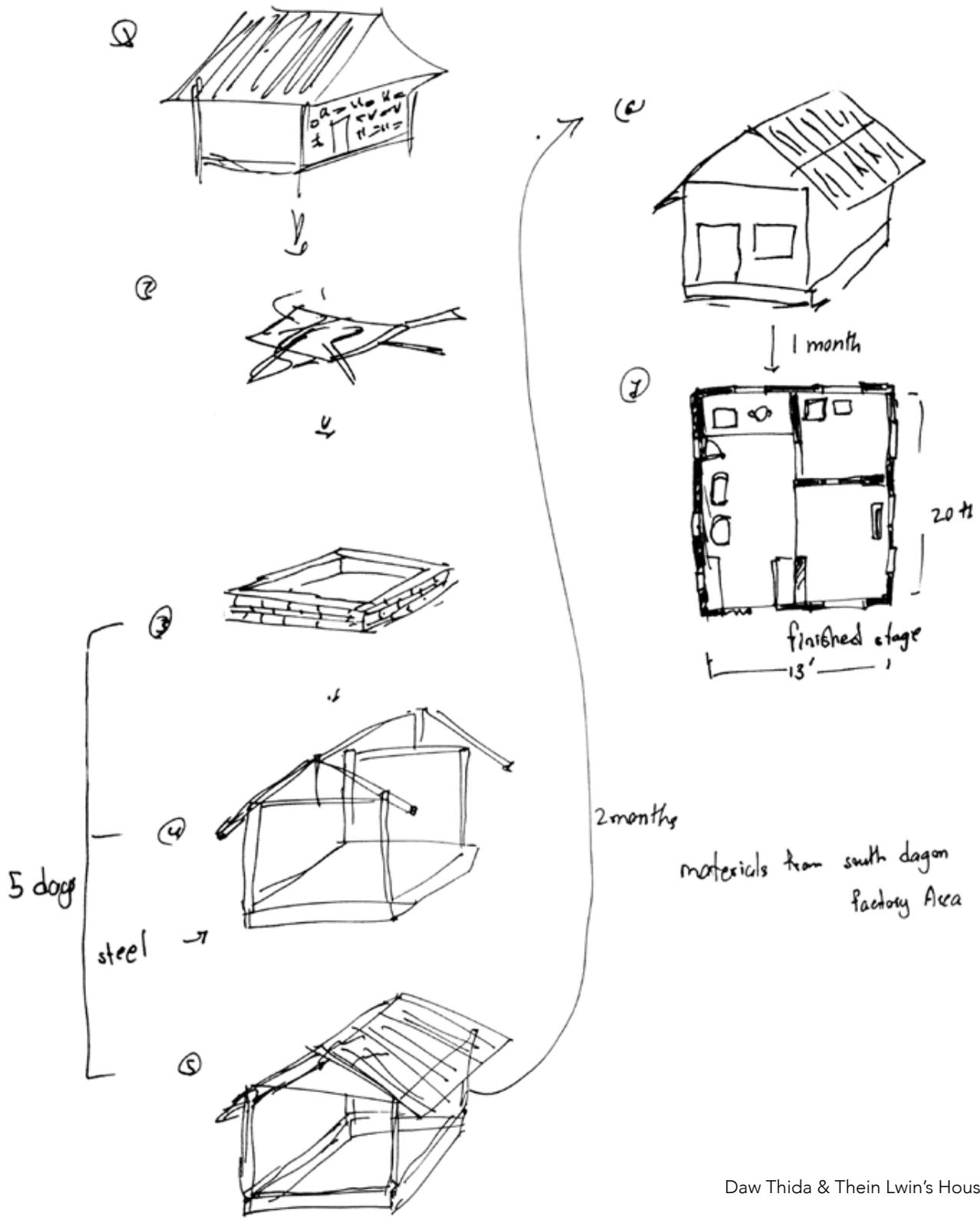
Spends approx. 15.000 a month on drinking water
Spends approx. 15.000 a month on bathing/washing water -

She has 1 plastic tank 100 L for storage - buys from neighbour /seller through movable hose system

Also collects rain water in the rainy season with metallic sheet gutter







Daw Thida & Thein Lwin's House Process

8.12 Daw Thida & U Thein Lwin's Story

Bamboo to Brick Structure with Water & Electricity @ X Street, Ward 67

Husband & Wife | Shop Owners | Brick Donators to Road Construction

Step 1 in housing:

Our housing process started with our move from Tharkayta Township where we paid 130.000 - 180.000Kyat per month on rent.

But because we wanted to own a home which we couldn't afford on the city market, we chose to move to Ward 67.

Step 2:

Upon arrival in Ward 67 we bought a Bamboo Structure and lived in it for 2 years, whilst we saved money in our shop business to rebuild the house.

Step 3: After saving, we chose to build a long lasting and cost efficient brick house with electricity and water connections including appliances and fittings to run our home properly.

Step 4:

We then started buying our materials from South Dagon Factory Area and demolished our Bamboo structure to ground level.

Step 5:

Together with our nephews who are masons, we built a brick foundation, then erected the load bearing structures to the roof. Whilst doing this, we lived in the house in the incremental process of the build.

Step 6:

For now we finished off the works on the house in a month including the mechanical and electrical appliances. The whole process took 4 months and continues to this day, but with less maintenance as a bamboo structure would require.

In the end, we now see that upgrading had an impact on the Ward as some people in the ward have followed suit in their housing process.



Daw Thida & Thein Lwin



Daw Thida & Their Lwin's House



8.13 Water Purification and Recycling Strategy

Scale:

Household

Implementation:

Short-term

Current modes of production:

Drinking Water:

Well water - water is available but is not potable

Bottled water - Sold around the ward but costly

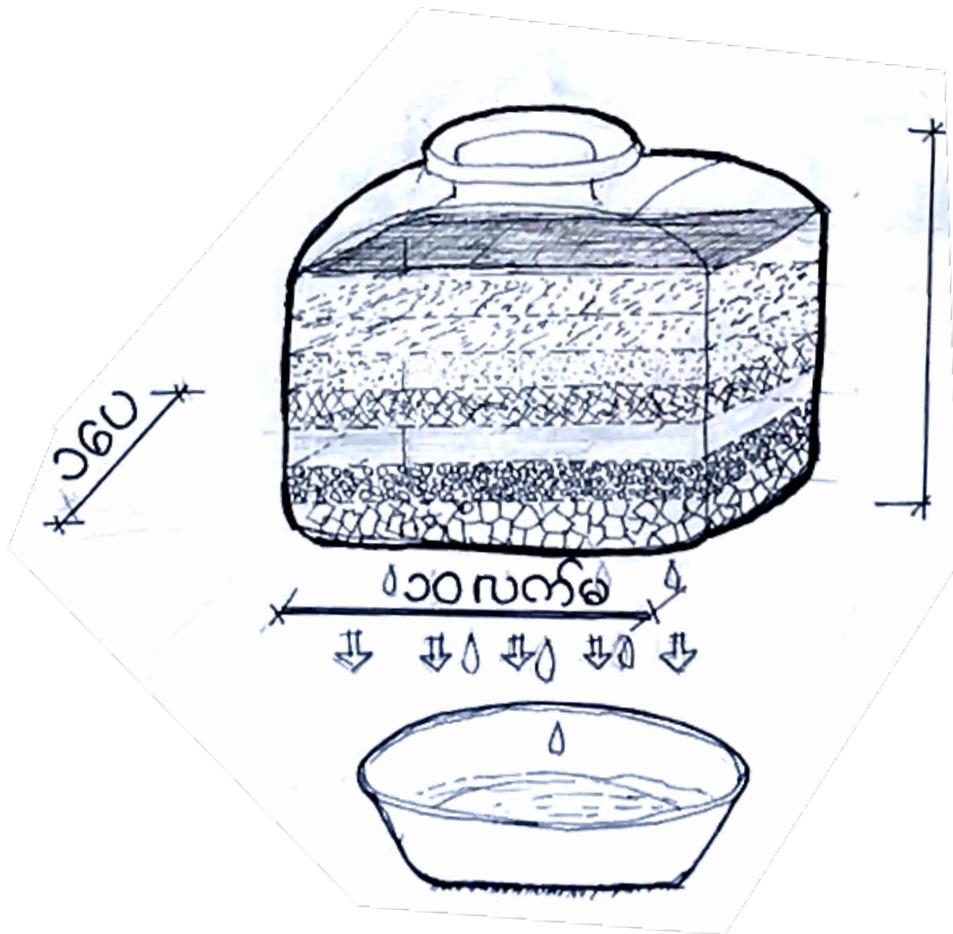
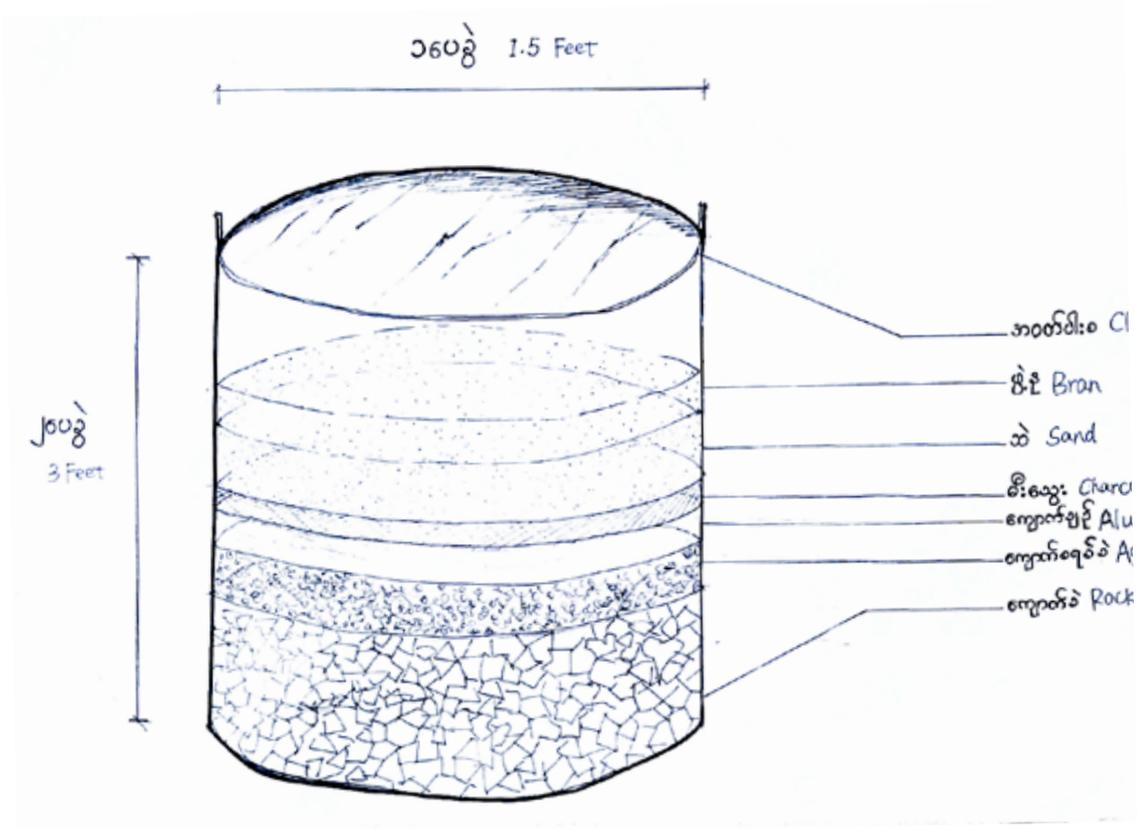
Bathing Water:

Well Water - private wells

Well Water - buying from private

Well Water - Carry from public well







Benefits and Opportunities

Purifying low quality water for drinking:

Cost Effective

Sustainable

Applicable - small size - using available materials

Recycling grey water:

Cost effective

Sustainable

Plants for use

Insect repellent

Possibility of expanding on a community scale

