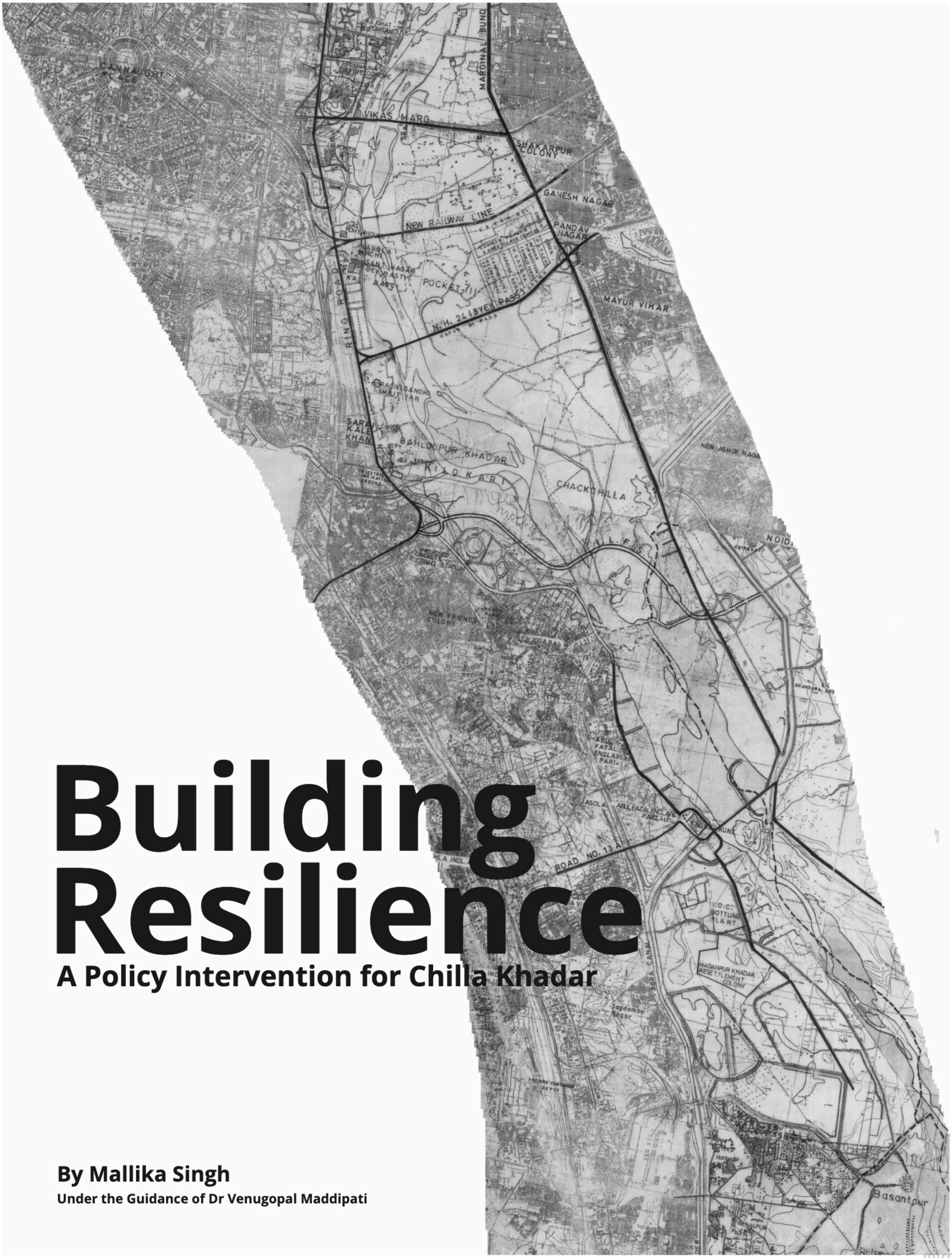


Building Resilience

A Policy Intervention for Chilla Khadar

By Mallika Singh

Under the Guidance of Dr Venugopal Maddipati

Abstract

The aim of this document is to create a policy for improving the security of belongings for the people of Chilla Khadar in times of flooding. The biggest obstacle in achieving this goal is the legal status of the land. As per several court orders, National Green Tribunal orders and the Delhi Master Plan 2041, habitation and agriculture in the floodplains of Yamuna are not permitted. In light of this, the problem at hand requires a dynamic solution which can ensure security for people both, in the short term and the long term. A short term solution will be able to provide immediate relief from the problem, whereas the long term solution takes a more permanent approach to ensuring security in a place where it is virtually impossible to live. This requires one to imagine the concept of tenure security more creatively and how this can be guaranteed through the implementation of policy.

In the duration of this project, several visits were made to the site of Chilla Khadar to get a better understanding of location and land use. Several interviews were also conducted with the residents to gain insights into the problems they face in times of disaster and the ways they've devised to overcome these. After understanding the problems at the ground level, extensive research was done to understand legalities behind those problems and how policies could be implemented to cope with them.

During the research it was found that the residents take extensive measures to secure their belongings in times of floods, which involves evacuating every last belonging to the nearest flyover (high ground and flood safe) by a tedious and time consuming process. It was also found that because of the legal status of the land, the residents could not invest in flood proof permanent building solutions for the fear of eviction by the authorities. This required the devising of sustainable and realistic solutions that could alleviate the risks of flooding with immediate effect while also thinking about a long term permanent solution.

Abbreviations

NGT	National Green Tribunal
DDA	Delhi Development Authority
HLRN	Human and Land Rights Network
NCT	National Capital Territory
UIDAI	Unique Identification Authority of India

Contents

SECTION - 1

Introduction 01

I. Background 02

A. Demographics 02
B. Housing Style 02
C. Experiencing the Flood 03

II. Recognising the System 04

A. Vulnerabilities in the System 04

III. Problems with Resettlement 05

IV. Legalities 06

A. Land Ownership 06
B. State Recognition 07

SECTION - 2

Project Statement 08

I. Short Term Solution 08

II. Long Term Solution (Policy) 10

A. Regularising Documentation 10
B. Survey of Land 11
C. Rehabilitation of Residents 12
D. Creating Awareness about Legal Rights 13

Introduction

Chilla Khadar is a large settlement situated in the Yamuna Floodplains, near Mayur Vihar in Delhi. As per secondary research data, the Khadar area experiences seasonal flooding during the monsoon period after the Yamuna's waters are released at the HathniKund Barrage in Haryana. The aim for visiting the community at Chilla Khadar was to understand how the community living there is affected by this seasonal flooding.

During one of the earliest visits to Chilla Khadar we spent our time interacting with the members of this community to better understand their lifestyle, and especially their co-existence with the river Yamuna. When questions about the impacts of flooding were raised, the majority of the community members spoke about 'loss'. 'Loss' as a concept for this community mostly meant material loss.
My aim was to get a better understanding of what this material loss meant to people, what was the hierarchy of belongings in terms of importance, and what methods were employed by the people to keep these belongings safe. My aim was to understand how Security as a broad theme operates within this system.

I. Background

Fig 1. Agricultural Tracts at Chilla Khadar, Source : Author

Fig 2. House made by a family from Bihar, Source : Author

A. Demographics

According to the HLRN, an estimate of 1000 families live in Chilla Khadar. Most of them are involved in agricultural work and some own small shops. According to the HLRN Eviction Impact Assessment Report, "the farm labourers do not have formal title to the land, though many of them have been living there for decades. Government officials told the residents that the DDA had acquired titles to the lands, which they have been inhabiting and using for their agricultural activities"

Most residents live in a large family setup with up to three generations residing together. Nearly all the children from the families go to school and receive formal education. However, the majority of older generations are uneducated and rely heavily on agriculture and animal husbandry to earn their livelihoods.

B. Housing Style

One of the first steps to understanding security and belongings was to understand the type of Houses this community lives in.

The people of Chilla Khadar originally come from the Purvanchal Region (Eastern Uttar Pradesh) and Bihar. As a result we found marked differences in the type of houses that both these communities construct. The primary difference was in the materials - communities from Bihar preferred to construct their homes wholly out of wood and straws, whereas communities from Purvanchal preferred to use clay and mud alongside wood and straws to build their homes.

A common pattern however, was that each family builds at least two separate structures or two homes - one structure for the men to reside in and the other exclusively for the women. The women’s structure is usually larger to include spaces for a kitchen and storage, in addition to the bedrooms

C. Experiencing the Flood

When the water is released from the HathniKund Barrage, residents of the settlement are informed by the authorities in order to prepare them for the incoming flood. The time for water levels to rise in the Chilla Khadar area is about 12-36 hours.
Once the water breaches the bank and starts flowing in, the residents begin to evacuate their belongings to the nearest flyover (flood safe zone). They do so by carrying all their belongings either by hand or in small carts. On average it takes one household 2-3 hours to complete this process of evacuation.

Once at the flyover, the residents erect tents on the flyover to store their belongings safely. A few tents are provided by DDMA but are not enough to accommodate every family; those who reach the flyover first get to occupy the government tents, and rest have to make their own.

The flood water takes 20-30 days to recede during which time the residents continue to stay put at the flyover. The flooding causes tremendous damage to the crops of the farmers as well as their housing structures. Government agencies make provisions for drinking water supply as part of Disaster Relief Measures.

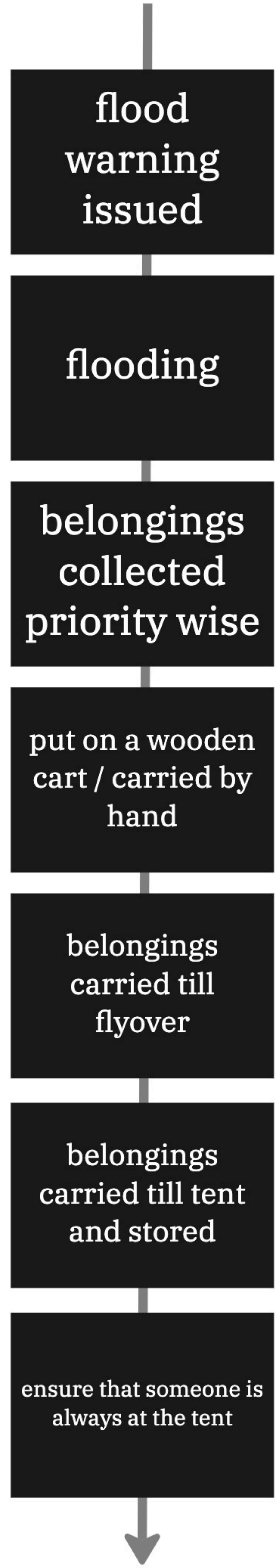
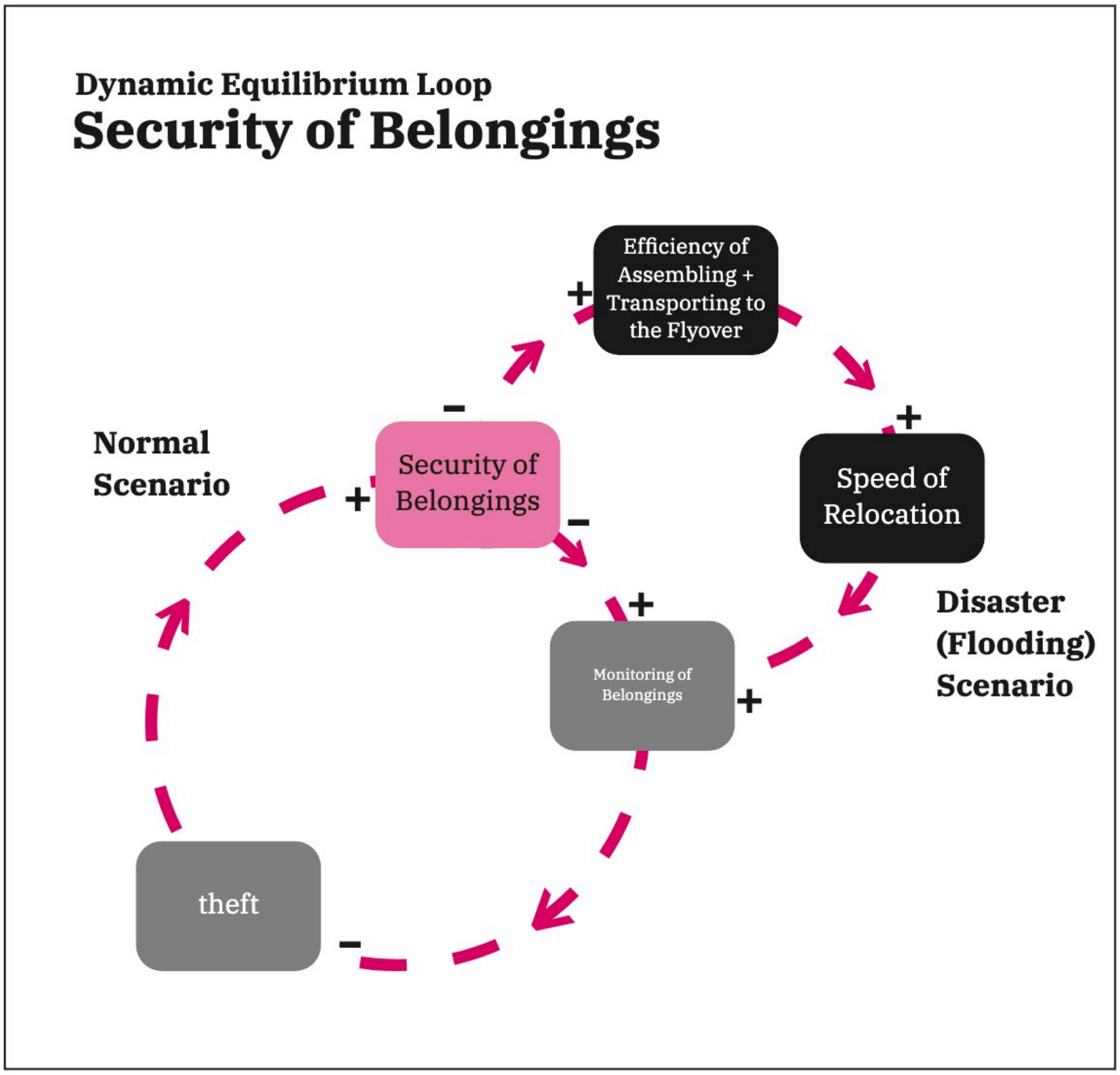


Fig 3 :
Disaster (Flooding) Scenario User Journey : Transporting Belonging to Flood Safe Zone

II. Recognising the System

The major threat to security of belongings is theft and flooding. Since the residents live in temporary structures, locks provide no help in securing belongings because these houses can easily be broken into. The ideal way of maintaining security of belongings then, is to ensure that someone is always at home to monitor. However, this threat also persists when there is flooding. Other than water damage, fear of theft continues to threaten the security of belongings. Therefore, during floods, it is a priority for the families to evacuate their all belongings safely and quickly. Leaving belongings behind is not an option.



A. Vulnerabilities in the System

1. The time taken to evacuate needs to be reduced. If the families take too long to evacuate their belongings, the water levels will increase and the risk of loss or damage will also increase
2. The residents cannot take any in-situ flood resilient measures like raising the level of houses. This is because building of permanent brick and mortar structures is illegal in the floodplains and the residents can risk forced eviction and demolition by authorities

III. Problems with Resettlement

The major threat to security of belongings is theft and flooding. Since the residents live in temporary structures, locks provide no help in securing belongings because these houses can easily be broken into. The ideal way of maintaining security of belongings then, is to ensure that someone is always at home to monitor. However, this threat also persists when there is flooding. Other than water damage, fear of theft continues to threaten the security of belongings. Therefore, during floods, it is a priority for the families to evacuate their all belongings safely and quickly. Leaving belongings behind is not an option.

III. Legalities

The Yamuna Floodplains have been declared as “Eco-sensitive river conservation zone(s) under provisions of the Environment (Protection) Act 1986 or the DDA Act, 1957 and the relevant Acts of the State of UP.” Due to the special status on the land, several disputes have arisen between the residents and state authorities.

A. Land Ownership

The first settlers at Chilla Khadar were agricultural workers. Most of them migrated from regions of Eastern Uttar Pradesh and Bihar and settled around the fields that they had leased from the landowners. The farmers cultivate the fields, sell the produce in the market and in exchange pay rent to the land owners. The residents have been following this system for decades and continue to do so even today.

When the DDA began to evict residents from the area there was a case filed at the High Court by the Yamuna Bank Kishan Bachao Morcha in February 2022. During the proceedings of the case, it was found that land was under the sole ownership of DDA. It was stated that the members of the Petitioner Society have been paying money to the Delhi Peasants Co-Operative Multipurpose Society Limited. Despite DDA cancelling their lease in 1967, the Delhi Peasants Co-Operative Multipurpose Society Limited continued to collect 'lagaan' till 2016 which is a criminal and fraudulent act.[3]

Ultimately the court dismissed the plea of the Petitioner Society to restrain DDA from evicting the residents on grounds that the residents were unlawful occupants and denied that provision of any sort relief to cover damages.

2 https://greentribunal.gov.in/sites/default/files/news_updates/Final%20Report%20by%20Yamuna%20Monitoring%20Committee%20in%20OA%20No.%2006%20of%202012.pdf

3 Yamuna Bank Kishan Bachao Morcha vs State Of Nct Of Delhi & Ors. on 1 February, 2022 https://indiankanoon.org/doc/72011178/

B. State Recognition

Currently the settlement of Chilla Khadar enjoys no formal recognition from the state. The primary reason for this being that the settlement is located in the Yamuna Floodplains where no settlement is legally allowed. A NGT ruling from 2018 has ordered DDA to clear the land and evict all the encroachers and illegal settlers. NGT's Final Report by Yamuna Monitoring Committee 2018 requires " total removal of all encroachments and solid waste", and "reclaiming possession of the floodplains" by the DDA. Additionally, in the Supreme Court judgement of Yamuna Bank Kishan Bachao Morcha vs State Of NCT Of Delhi & Ors. (1 February, 2022), the court also stated that no compensation or relief for damage can be availed by the residents since they are "unlawful occupants".

Additionally, the NGT has also ordered the " prohibition of growing agricultural crops and vegetables and permitting only floriculture and tree planting" in the floodplains because the fields use water from Yamuna which contains high levels of toxic chemical waste. The consumption of crops from these fields would be detrimental to the health of people.

Due to such complex legalities regarding the floodplains, the settlement has failed to get formal recognition from the state. This is one of the primary reasons why residents are bound to a certain type of lifestyle in order to survive on this land. For instance, the residents continue to live in temporary houses made of mud and wood, because the state doesn't allow the building of permanent structures in the floodplains. Additionally, investing in building permanent structures would be futile because the DDA carries out frequent demolitions in the area in an attempt to clear out encroachment. Living in temporary structures only makes the residents more vulnerable to flood and fire related disasters.

Moreover, since the state doesn't formally recognise the settlement, they are not obligated to provide any facilities required as per the fundamental rights to Life and Housing. As a result, the settlement continues to survive without any proper supply of electricity and water. A few families invest in batteries and small solar panels to meet basic needs of electricity and limited hand pumps and bore wells are used to meet the needs for water supply.

4 https://greentribunal.gov.in/sites/default/files/news_updates/Final%20Report%20by%20Yamuna%20Monitoring%20Committee%20in%20OA%20No.%2006%20of%202012.pdf

5 Yamuna Bank Kishan Bachao Morcha vs State Of Nct Of Delhi & Ors. on 1 February, 2022 https://indiankanoon.org/doc/72011178/

6 https://greentribunal.gov.in/sites/default/files/news_updates/Final%20Report%20by%20Yamuna%20Monitoring%20Committee%20in%20OA%20No.%2006%20of%202012.pdf

Project Statement

The problem at hand requires a two pronged approach for devising an appropriate solution - a short term design solution that is affordable and achievable ; and a long term policy driven solution that is more permanent and sustainable in the long run.

I. Short Term Solution

The aim of creating a short term solution is to provide an immediate answer to the problem at hand. This solution caters specifically to the need of evacuation of belongings from homes to the flyover in the most convenient and swift way possible. As established earlier, the longer it takes to evacuate belongings, the water level also increases and so does the risk of damage and loss of property.

Most normative flood resilient measures resort to constructional elevation of houses and waterproofing. However, that is a more permanent solution and requires larger investments of time, money and materials. The residents are reluctant to make these investments because they have no tenure security and fear eviction at any given time. In light of this, the short term solution should be affordable and achievable for the residents.

M. Kamakshi Kanchana has authored a paper titled ‘Low-Cost Flood Resilient Interior Design for Indian Homes’, in which she lists several affordable materials that can be used for flood resilience. Most of the solutions however, refer to creating in-situ flood resilience in houses. One particular material listed in the paper seemed to fit the problem at Chilla Khadar most suitably - the stackable drums or barrels. Although, the use of the drums in this paper limits its usage to a waterproof storage solution within the house itself.

In the scenario of Chilla Khadar, in-situ storage of belongings is not an option. Even though the drums provide flood resilience for belongings, they do not provide resilience against theft, hence, the belongings have to be evacuated. In this case, the drums can play a more dynamic role.

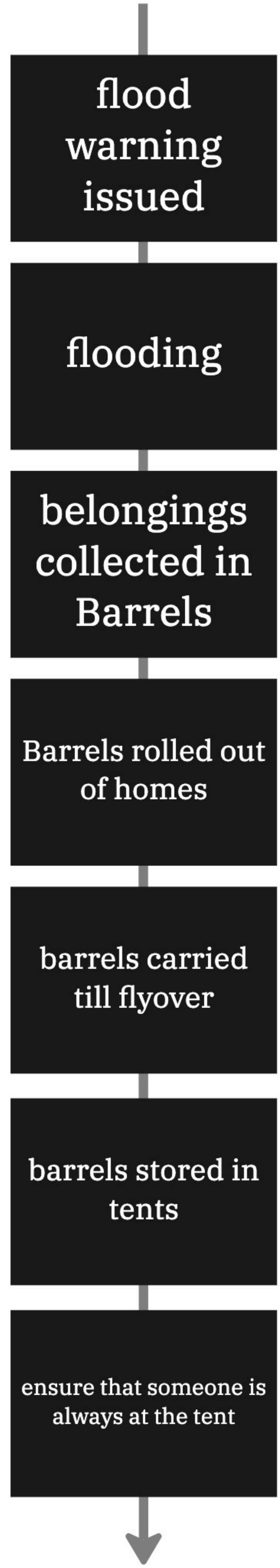
Plastic oil /chemical barrels (200l capacity) are commonly used for industrial purposes and are cheaply available with local scrap dealers for affordable prices of approximately Rs.750 per barrel. During the dry seasons these barrels or drums can be used to store and conserve water which is already in short supply at Chilla Khadar. During floods these same barrels can be used to store and transport belongings out of homes. Barrels are large and can store a lot of household items safely. When homes start flooding, members of the family can quickly gather their belongings and put them in these barrels, which is much easier than gathering belongings one by one and then either carrying them by hand or transferring them in a cart. Using barrels for storage will also conserve the time taken for offloading all the belongings at the flyover and then rushing back for a second round.

Fig 4 & 5. 200l Industrial Barrels/Drum, Source : google images

Fig 6. Flyovers or Flood Safe Zones near Chilla Khadar , Source : Author

Fig 7. Size of narrow lanes at Chilla Khadar where carts do not fit, Source : Author

Fig 8 (right) : Disaster (Flooding) Scenario User Journey - Transporting Belonging to Flood Safe Zone with the use of Barrels



Another hurdle in the process of evacuation is transporting belongings safely till the flyover. Certain houses are located in narrow lanes and pathways where carts cannot fit. For such houses, belongings have to be first carried by hand till the pathway that is wide enough to fit a cart and from there the cart is taken till the flyover - a very tedious and time consuming process. However, if barrels were being used, their cylindrical shape makes it very easy to roll the barrels out of homes, regardless of their weight, making the process faster and less labour intensive. Since these barrels are waterproof, none of belongings are going to be damaged by water in this process. Even if the flood levels start to increase, barrels will begin to float and hence make it easier for residents to navigate their belongings through water.

Therefore, Barrels prove to be the most affordable and suitable short term solution for ensuring security of belongings and avoiding loss. Such barrels can easily be used to store the majority of household items like - clothing, mattresses, food utensils and books. Other materials like furniture will still have to be carried out individually after the rest of the belongings have been secured. The usage of barrels not only speeds up the process of assembling belongings, but also speeds up the process of transporting all the belongings safely till the flyover.

II. Long Term Solution (Policy)

The primary objective of a long term policy driven solution is to provide tenure security to the residents of Chilla Khadar. Providing tenure security would provide reassurance to the residents that they will not face forced eviction from these lands. This will encourage the residents to take more permanent measures to secure their houses against flooding. Although, the legal frameworks make it clear that residing in the floodplains is not permitted, policy can be implemented to cater for rehabilitation of the residents as per established norms of the state.

A. Regularising Documentation

Aim : Regularising Documentation for all the residents will make them recognised beneficiaries of the State. This will make the residents eligible for state relief funds in case of damages caused by flooding. Documentation of residents will also give the state crucial resident data which will enable the state to provide adequate resources and relief in case of disasters.

1. The primary objective of a long term policy driven solution is to provide tenure security to the residents of Chilla Khadar. ProvidinAadhaar registration camp to be set up for regularising documentation of residents

i. Procedures mandated by UIDAI to be followed

2. Additional aid to be provided for assistance regarding procurement of necessary documents for Aadhaar Registration

4

5

B. Survey of Land

Aim : As per The Slum Area (Improvement and Clearance) Act, 1956, if the settlement meets the listed requirements the act mandates that it is declared a Slum. Once it is notified as a Slum, the settlement gains state recognition and becomes a beneficiary to the Delhi Slum and JJ Rehabilitation Policy 2015.

Definitions : *Slum* - "A slum is a compact settlement of atleast 20 households with a collection of poorly built tenements, mostly of temporary nature, crowded together usually with inadequate sanitary and drinking water facilities in unhygienic conditions" .

According to the Slum Area (Improvement and Clearance) Act 1956, the process of Declaration of Slum areas is as follows :

"Declaration of slum areas.- (1) Where the competent authority upon report from any of its officers or other information in its possession is satisfied as respects any area that the buildings in that area—
(a) are in any respect unfit for human habitation; or (b) are by reason of dilapidation, overcrowding, faulty arrangement and design of such buildings, narrowness or faulty arrangement of streets, lack of ventilation, light or sanitation facilities, or any combination of these factors, are detrimental to safety, health or morals, it may, by notification in the Official Gazette, declare such area to be a slum area."

1. Survey of Land to Recognise Settlement as a Slum

i. Designated representatives from the Concerned Authorities to carry out a survey of the land and the settlement and make a report of the settlement's eligibility to be notified as a Slum.
ii. While the process of notification is ongoing and pending, the state needs to put a stay on the NGT order of eviction of 'encroachers'.
iii. Transparency of the process to be maintained with the residents and regular updates on the proceedings to be provided to them.

2. Implementation of Delhi Slum and JJ Rehabilitation Policy, 2015

i. After recognition of settlement as a Slum, the Delhi Slum and JJ Rehabilitation Policy, 2015 can be implemented.

The policy places emphasis on in-situ upgradation of houses. However, if the settlement lies in a risk prone area, like the Flood Risk at Chilla Khadar, then the policy mandates the rehabilitation of residents to a site within a 5km Radius from the original settlement.

ii. Land for Resettlement Colony to be identified by the concerned authorities at the earliest.

a. Suitable sight to be identified within a 5km radius, keeping in mind the location of the current school of children.

iii. Arrangement for smooth resettlement of residents to be arranged

a. A notified period of 30 days to be given to all residents for shifting to Resettlement colony
b. Amount to be allocated from Corpus Fund as per 3.A for the packing and moving process of belongings.

iv. As per the Policy, " a dwelling unit shall be allotted to the eligible JJ dweller for a period of 10 years on lease-hold basis after which it will be converted into free-hold as per prevalent policy".

a. The 10 year period to be extended if the child is in school.
b. The period to be extended till the time the child has passed 10th/12th Grade.

C. Rehabilitation of Residents

Aim : As per the NGT order, agricultural activities are prohibited in the Yamuna Floodplains. Once the resettlement is complete, most residents will lose their means of earning a livelihood. In the light of this, the policy aims to provide skill enhancement and vocational training to residents to smooth their rehabilitation process.

1. Institution of a Corpus Fund

i. A Corpus Relief Fund to be instituted by the Revenue Department under the government of NCT
ii. The authorities also need to create a framework of eligibility for residents to avail the funds.

2. Implementation of Government funded / NGO led skill enhancement and vocational training courses for residents.

i. The age limit for being admitted to the courses should be 18 and above.
ii. Funding for maintenance from Corpus Fund to be provided to residents for the duration of these courses

3. Support to be provided for finding alternate employment opportunities near new Resettlement Colony

D. Creating Awareness about Legal Rights

Aim: As mentioned earlier in the document, the residents have faced exploitation from entities claiming to be landowners and exacting rent even when the legal authority of the land is under DDA. The residents were also given no relief by the court who designated them to be unlawful occupants. If the residents were educated about their legal rights, they would understand the requirements of legal contracts when leasing land and so on. Making the residents aware of their rights will only safeguard them against exploitation from authorities in the future.

1. **NGO led campaigns and booths to be set up for systematically creating awareness on legal rights of citizens.**

2. **Booths may also provide facilities for providing legal advice and answering legal queries of residents.**

3. **Simple brochures and pamphlets can be distributed to residents for purposes of creating legal awareness. Pamphlets to also list affordable legal resources and contacts that can be availed by residents if any need arises.**