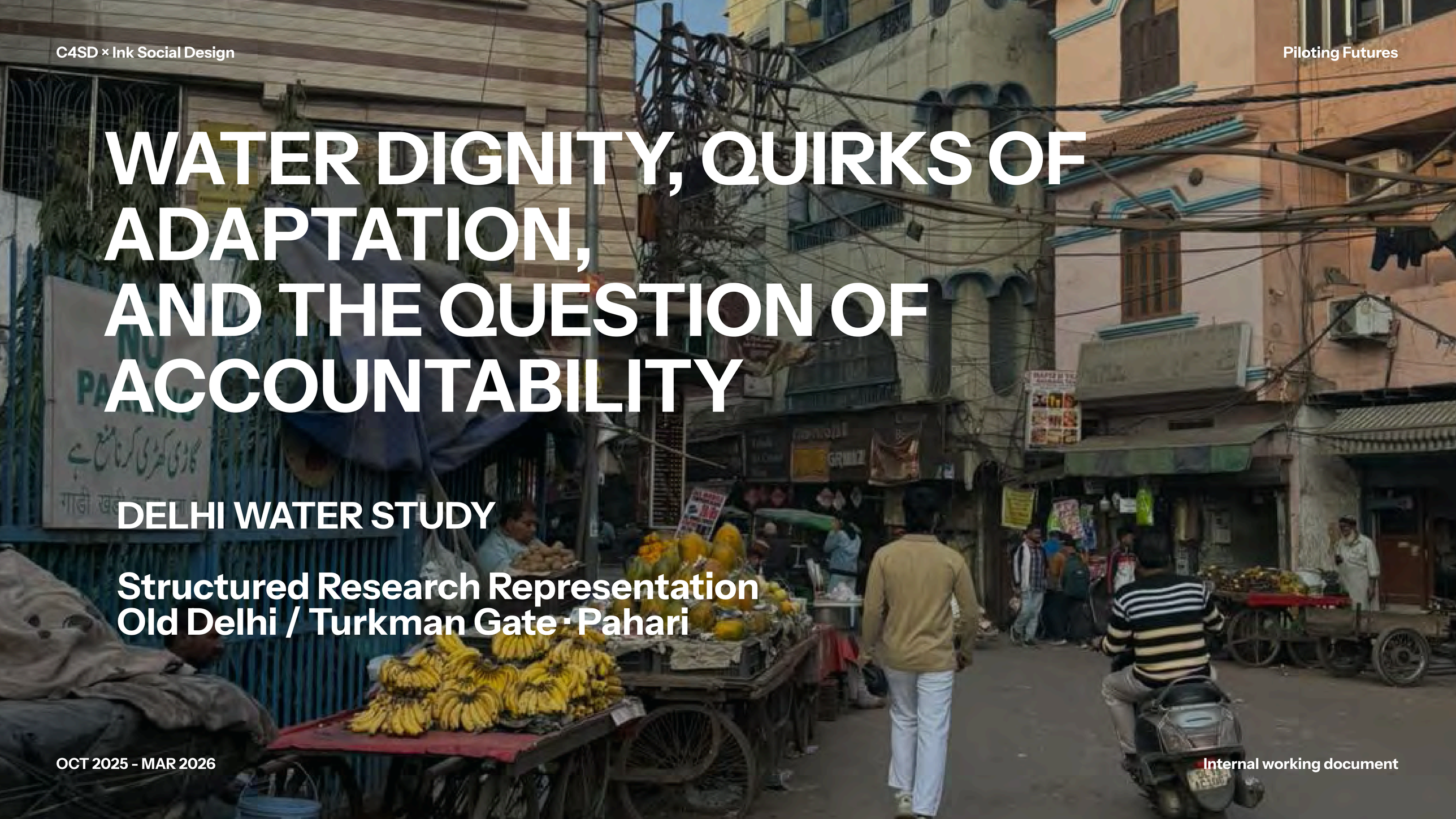


WATER DIGNITY, QUIRKS OF ADAPTATION, AND THE QUESTION OF ACCOUNTABILITY

DELHI WATER STUDY

Structured Research Representation
Old Delhi / Turkman Gate · Pahari

00

WHY THIS RESEARCH MATTERS

Access to water in Indian cities runs along social lines, not just infrastructural ones. Class, religion, gender, and tenure decide who gets water, when, and at what price.

CONTENTS

This document presents research conducted by the Centre for Social Design Pvt. Ltd. in partnership with Ink Social Design, Amsterdam, supported by the Embassy of the Kingdom of the Netherlands in India. It combines primary fieldwork and secondary research. Sources are listed in the annexure.


Jama Masjid
जामा मस्जिद
SITA RAM BAZAR
सीता राम
बाज़ार
CHANDNI
MAHAL
चांदनी महल

01

BACKGROUND, SITE & CONTEXT

Ward 78, Sitaram Bazar, a few hundred metres that concentrate almost every condition this research wants to study.

WHY WARD 78 — SITARAM BAZAR, OLD DELHI?

Sitaram Bazar concentrates, in a few hundred metres, almost every condition this research wants to study. A historically dense community, a heritage built form that cannot easily be retrofitted, a layered population shaped by migration, and a daily life where water access varies sharply between neighbours sharing the same haveli wall.

History. A 350-year-old water culture still legible in the lane, wells, baolis, courtyard cisterns, piaus, household matkas, surviving alongside the formal pipe that was laid over it.

Infrastructure. A colonial-era network serving 21st-century density. The 1936 Chandrawal plant still feeds pipes sized for a fraction of today's population; lanes are too narrow for tankers; a single DJB connection often serves a haveli sub-divided five to ten ways. The neglect was a planning decision, the 1962 Master Plan prioritised New Delhi and relegated Shahjahanabad. Sixty years on, residents in Matia Mahal say "the pipe came to my area, but only a handful are getting piped water" and "getting piped water is still a dream."

Religion. A mohalla where Hindu, Jain and Muslim water-cultures share the same lane. Temple abhishek, mosque wuzu, and Muharram sabeels run alongside the same DJB tap.

Migration. A community in three layers — old propertied families, settled tenants, and recent migrant labourers from Bihar, UP, and Bengal — each experiencing water differently inside the same building.

MIGRATION IN THREE LAYERS

Layer 1 — The old residents

Families who stayed through Partition. A predominantly Muslim population, with a small Hindu and Jain presence, temple-keepers, trading families, Brahmin households tied to specific shrines. The Goswami family at Ladliji Ka Mandir has occupied the same haveli courtyard for ten generations. They work as wholesale and retail traders in textiles, spices, electronics, and books, mostly along Sitaram Bazar Road and Chawri Bazar. Monthly household income: ₹40,000 – ₹1,50,000+.

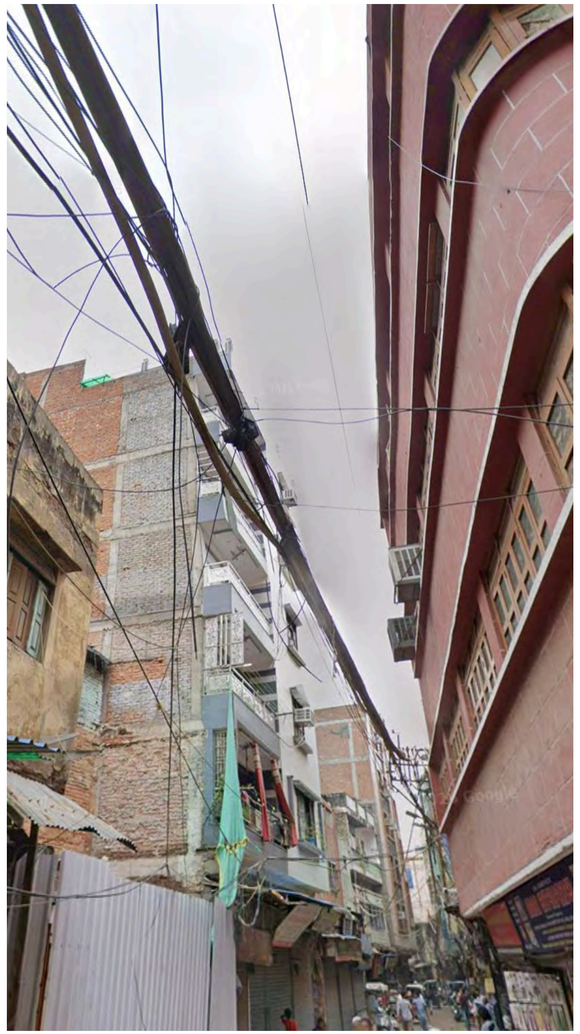
Layer 2 — The Partition-era exit

Sitaram Bazar's Kashmiri Pandit and Brahmin population largely dispersed in 1947–48. Their havelis were subdivided or absorbed. The lane names stayed, Kucha Pandit, Kucha Kashgiri long after the communities had gone. Those havelis now house Layer 3.

Layer 3 — The post-1980s arrivals

Muslim migrants from Bihar, eastern UP, Bengal, and Assam, working as zardozi embroiderers, leather workers, food-processing labour, porters, and rickshaw pullers. They live in subdivided rooms inside the same havelis as the older families. Daily-wage and piece-rate work, ₹400–700 a day when available. Household income ₹10,000–15,000 a month, typically supporting 4–6 people. Children are pulled into the trade by 12–14; higher education is out of reach.

A fourth movement, in the opposite direction:
The educated leave for work elsewhere. Labour migrants arrive to fill the gap. The pattern holds.



HOW DOES THE WATER REACHES TO THESE THREE TIERS OF HOUSEHOLDS:

TIER	HOW WATER REACHES THEM	WHAT THEY HAVE TO DO FOR IT	WHAT THEY PAY FOR
Tier 1 Owner families	A private pipe runs from the main line into their home, up to a tank on the roof	Open a tap	Often nothing — they fall under the 20,000-litre free quota. **Less than 1% of income.**
Tier 2 Settled tenants	One pipe enters the haveli and feeds a shared tank; everyone draws from a common tap downstairs	Wait their turn at the shared tap	A share of the haveli's bill plus motor electricity. **Roughly 2–4% of income.**
Tier 3 Migrant tenants	No pipe of their own; they use the public tap at the lane.	Stand in queue for hours, then carry water back through the lanes in buckets and jerrycans	Tanker contributions, 20-litre jars, bottled water for drinking. Up to ₹3,000 a month — **20–25% of income.**

THE SUPPLY SIDE SYSTEM - HOW DOES IT LOOK LIKE

Three facts decide what every household in Ward 78 experiences as "water."

1. The source is shared with Lutyens Delhi. The pipes are not.

2. The pipes were laid for a smaller city, and never re-laid.

3. The supply is intermittent. Storage is the system.

Chandrawal Water Treatment Plant

Water supply to Old Delhi on a time basis

Almost all piped water in Sitaram Bazar comes from the **Chandrawal Water Treatment Plant,** built on the **Yamuna in 1936** (Delhi's oldest treatment plant), now widely considered obsolete.

Command Area - 96 sq km

Serves - 21 lakh people

Chandni Chowk, Civil Lines, NDMC areas, and the Cantonment. Sitaram Bazar shares its water source with Civil Lines bungalows and Lutyens Delhi.

The 1962 Delhi Master Plan prioritised New Delhi's expansion and relegated the Walled City's needs. Sixty years later, the consequence is measurable: 30 to 45% of the water DJB sends out is lost in transit, to leaks, theft, and metering failure, before it reaches anyone's tap.

A ₹1,331 crore pipe-replacement programme announced in 2026 aims to bring this under 15%, but the work has not yet begun in Ward 78.

DJB does not run a 24×7 network in Old Delhi. Water is delivered twice a day, **each lasting 30 to 90 minutes.**

For Matia Mahal (which contains Ward 78), supply timings vary and are routinely disrupted in summer and during pipeline work. every household has to store water for the other **22.5hrs** and the ability to store is itself unequally distributed.

The supply side does not produce water inequity. The supply side produces a window.

AFTER A GAP OF 13 YEARS, DELHI TO GET NEW WATER TREATMENT PLANT

ork on Chandrawal water atment plant to start soon

ch will be constructed under phase-2, would cost Rs 598 crore in three years, l augment the Delhi Jal Board's water supply by 106 million gallons per day

NDENT

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frequent stoppage of WTP due to ammonia discharge by Haryana. The capacity will be constructed in addition to the existing 90 MGD plant," the DJBV C Mohaniya said.

"We did not set up the plant earlier because we did not have water for it. It's pointless to have a plant when you do not have raw water. Now, water is available with us. The work is likely to start on June 24 or 25," DJB Vice-Chairman Dinesh Mohaniya said.

The new WTP will be constructed at a cost of Rs 598 crores in three years. Currently, the utility is supplying 900 MGD of drinking water to the city on an average against the demand for 1,120 MGD. The peak production is around 935 MGD. There are a total of 11 water treatment plants in the national capital, a DJB official said.

The deficit of 204 MGD means immense misery for lakh of people. Almost 80.31 per cent of Delhi's houses today have piped water supply and Delhi Jal Board even takes water 1153 of the 1650 unauthorised colonies.

The command areas under this project broadly consists of the Old Delhi areas of Chandani Chowk, Pahari Dhiraj, Idgah, Civil Lines, Karol Bagh, Kamla Nagar, Malkganj, Rajinder Nagar, Shadipur, Patel Nagar, Naraina, north and west Delhi including the bulk supply areas of the NDMC and the Cantonment areas.

The BJP and the Congress have been trying to corner the AAP government in Delhi over the alleged water shortage. On Tuesday, a Delhi BJP delegation gheraoed the office of DJB CEO Nikhil Kumar protesting over the issue.

Chandrawal WTP breaks down, residents buy water to cook and bathe

Neha Mishra / Updated: Mar 27, 2026, 06:55 IST

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TOI

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New Delhi: Households in Civil Lines, near Hindu Rao Hospital and adjoining areas are spending Rs 150-300 daily on water as technical problems at the Chandrawal Water Treatment Plant has led to a halt in water supply.

In some neighbourhoods, some are turning to public washrooms for non-drinking water.

Among the affected areas are Kamla Nagar, Shakti
ties, Karol Bagh, Paharganj, and Rajiendra Nagar, Patel Nagar (East and West), Baljeet
rpuri and NDMC areas.

ing to nearby localities or queuing up at public taps, often for hours. The combined
; which has now been replaced by water of unsafe quality, has left families struggling to
such as cooking and drinking.

Hindustan Times

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Delhi's Chandrawal water treatment plant still not fully operational, spare parts unavailable

Delhi's Chandrawal water treatment plant struggles to restore operations after flooding, causing severe water rationing and contamination issues

Updated on: Mar 30, 2026 7:38 AM IST

By Paras Singh

mint

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Delhi water crisis alert: Supply hit as production falls at Wazirabad and Chandrawal WTPs; check affected areas

Delhi Jal board said water supply will be available at low pressure in most areas till the situation improves, without giving a specific timeline.

THE DEMAND-SIDE SYSTEM — WHAT THE WARD ACTUALLY NEEDS

1. The population is dense, layered, and growing.

Ward 78 holds an estimated 40,000–50,000 residents inside a few hundred metres of historic walled-city geometry. The wider Matia Mahal constituency that contains it has over 1.7 lakh people. Density here is among the highest in Delhi, and rising driven by post-1980s migration from Bihar, eastern UP, Bengal, and Assam.

1. **The DJB design norm is 135 litres per person per day.**
2. **For Ward 78's resident population alone, that translates to a baseline daily demand of roughly 5.4 to 6.7 million litres, before any commercial, religious, or visitor demand is added.**

2. There are 4 key things which are current priorities for the people living in the area.

	Who	What they need water for
Residential	~10,000+ households across four SES tiers	Drinking, cooking, washing, bathing, cleaning
Commercial	Wholesale and retail trade — textiles, spices, electronics, food, leather	Daily floor-washing, vessel-washing, food-prep, dyeing, cooling
Religious	Mosques, temples, sabeels, dargahs	Wuzu (five times daily), abhishek, Muharram water-distribution, daily ritual cleaning
Mobile	Vendors, e-rickshaw drivers, market porters, single-male labourers, day visitors	Drinking, hand-washing, occasional bathing — typically through public, mosque, or shop taps
Each of these four demand streams sits on the same supply window. None has its own pipe.		

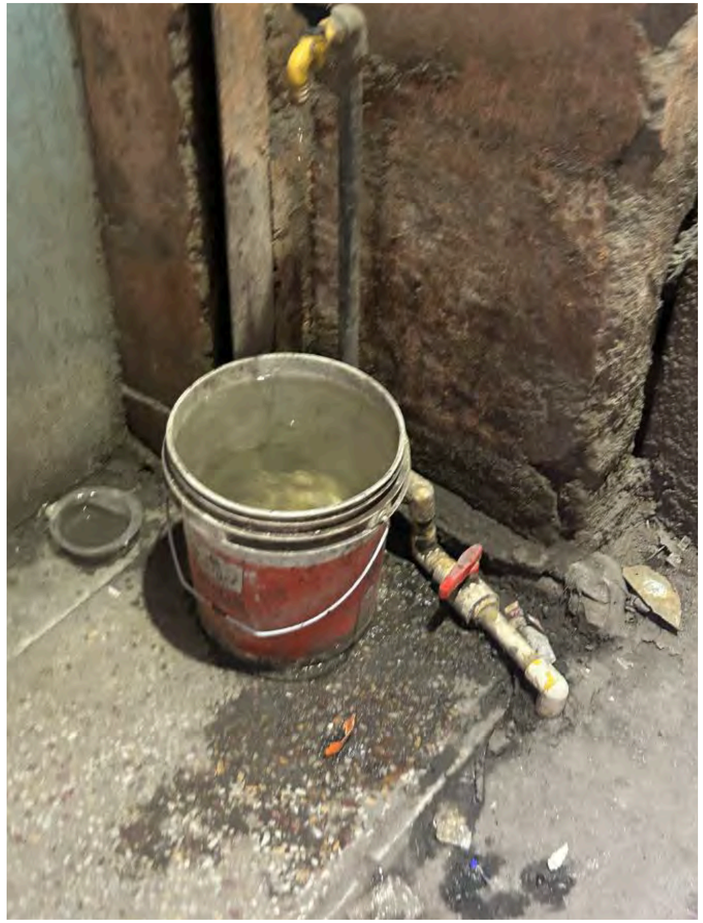
THE DEMAND-SIDE SYSTEM — WHAT THE WARD ACTUALLY NEEDS

3. Demand peaks when supply ends.

The supply schedule and the demand curve do not match.

DJB releases water in fixed windows, But the demand for water rises sharply between the following windows: cooking through the day, mid-day commercial activity, the five daily prayers, the late-afternoon return of working migrants, the evening meal, and overnight household needs.

The storage layer: rooftop tanks, courtyard sumps, plastic drums, clay matkas, jerrycans, is what bridges the gap.
For households without storage, that gap is filled by the tanker, the bottled jar, the mosque tap, or going without.



THE DEMAND-SIDE SYSTEM — WHAT THE WARD ACTUALLY NEEDS

5. Some forms of demand are invisible to the system.

The DJB plans for residential demand. It plans imperfectly for commercial demand.

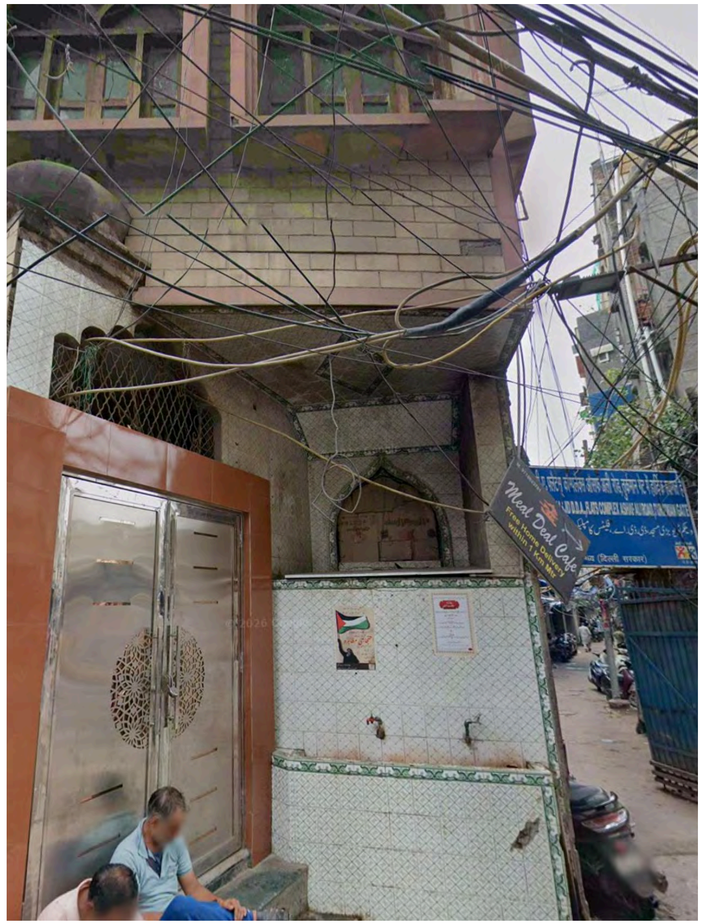
It does not plan for:

Religious demand, mosque ablution, sabeels, temple ritual water.

Mobile demand, the vendors, rickshaw pullers, porters, and labourers who pass through the ward daily.

Gendered demand, the additional collection, queueing, storage, and household-distribution labour that falls almost entirely on women, and the menstrual hygiene needs that the supply schedule does not accommodate.

These three categories are where the formal system most consistently fails and where the informal system has been quietly compensating for decades.



CONTEXT

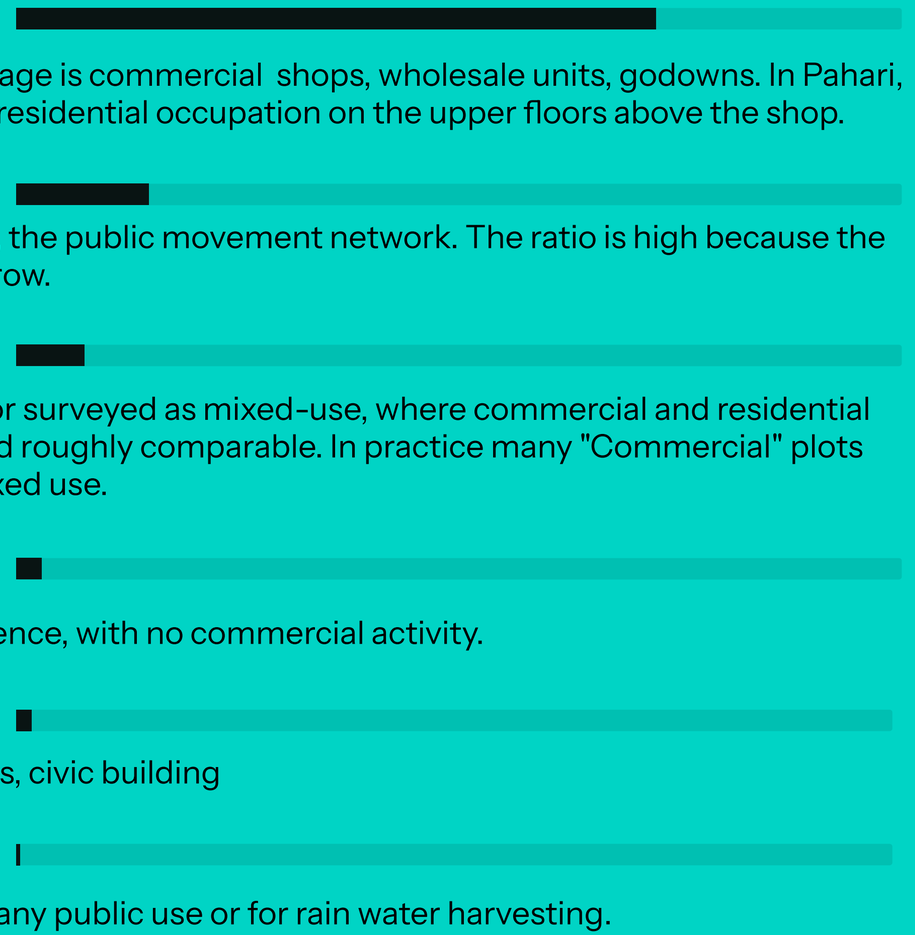
These percentages describe how plots are categorised by their primary use, not where people live.

The lived reality of the area is residential-above-commercial, the great majority of plots categorised here as "Commercial" carry housing on their upper floors.

This is the pahadi condition: residence is stacked vertically above commercial frontage, often three to four floors high, on plots that the survey records by their ground-level function.

Read together, the table establishes three things that matter for the water study: (1) almost every plot in the area carries multiple uses, including residence, on a single connection; (2) there is essentially no open ground for rainwater harvesting, ground-level storage, or dispersed water infrastructure; and (3) the demand on each water connection is shaped by vertical occupation, not by plot category.

Source: Geospatial, Site Survey



MORPHOLOGY

The neighbourhood's present density is the cumulative result of four migration events, each of which left the city denser than the one before. The pattern is documented from historical and urban-geography sources and is corroborated by the team's mapping of present-day building types.

	Migration type	**Spatial outcome**	
Post-1857	Displacement	Segregation begins	Community fragmentation
Post-1947	Refugees	Haveli subdivision	Dense enclaves
Late 20th c.	Rural migrants	Informal densification	Occupational clustering
Present	Continuous inflow	Hyper-dense mohallas	Tight-knit enclaves

Read as a sequence: the planned Mughal city was fragmented by colonial disruption; migration pressure subdivided the haveli; informal densification clustered communities by trade; and continuous inflow has produced the hyper-dense urban core that exists today.

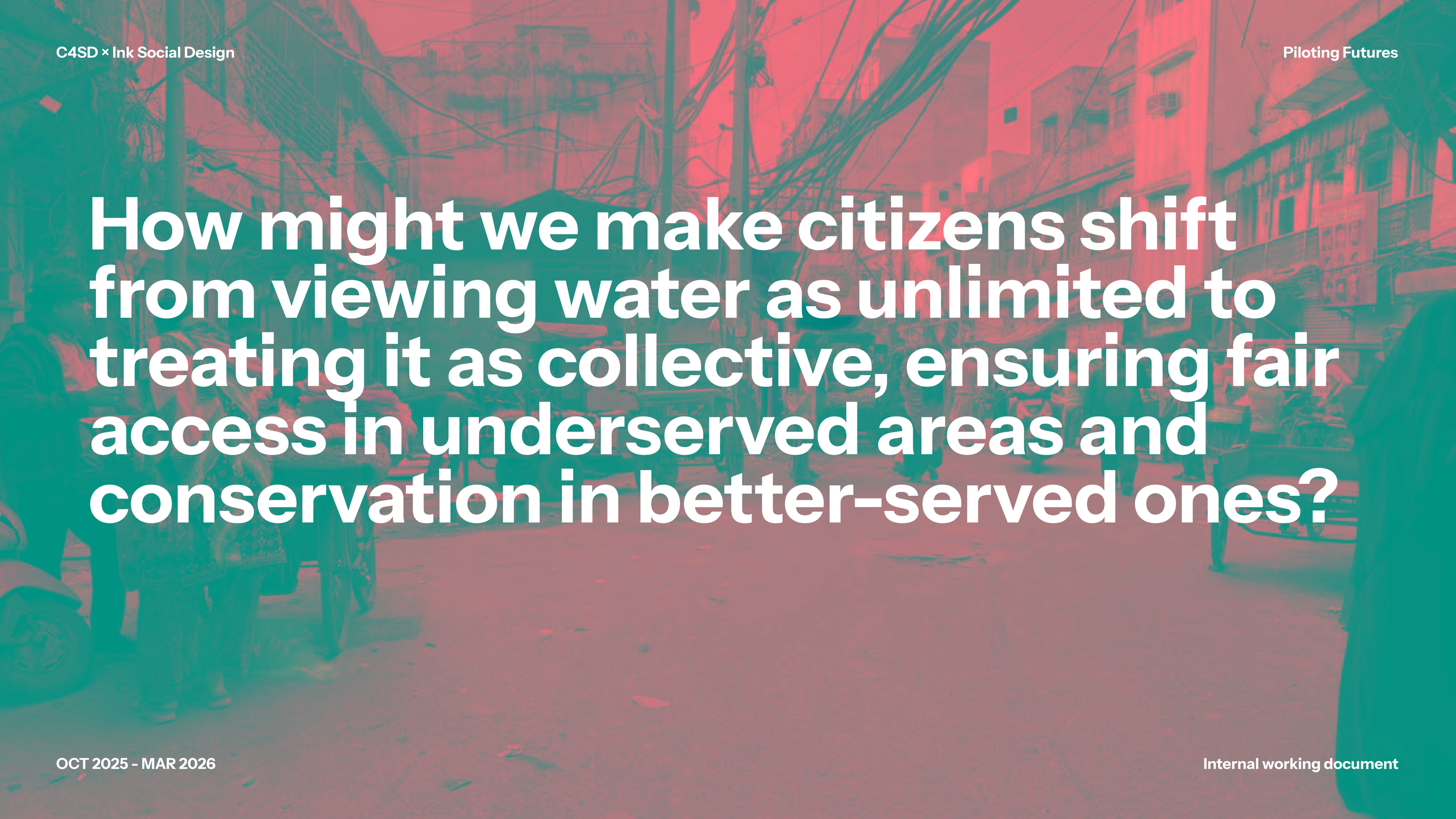
Each transition added population without proportional addition of infrastructure: water, in particular.

02

PILOTING FUTURES

This Delhi study is one of three city pilots, same lens, different civic system.

OCT 2025 - MAR 2026



How might we make citizens shift from viewing water as unlimited to treating it as collective, ensuring fair access in underserved areas and conservation in better-served ones?

PROJECT OVERVIEW

This Delhi water study is one of three pilots in a larger programme titled Piloting Futures Through Social Design, jointly conducted by the Centre for Social Design (C4SD). The programme runs from October 2025 through September 2026.

Each pilot tests a different question about how social design can intervene in civic systems taking a specific city, a specific institutional partner, and a specific lived problem, and treating them as a single working unit.

C4SD

Centre for Social Design

WHERE THIS SITS

This study is the Delhi pilot inside a larger three-city project, Piloting Futures Through Social Design, running in:

Patna
(Ganga Path riverfront)

Delhi
(water access in Old Delhi)

Ghaziabad
(waste in a village)

WHERE THIS SITS

The study is being conducted in collaboration with:

the MCD relationship held by **Ms Rafia Mahir**

is funded under the **Netherlands Embassy**

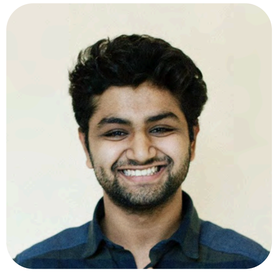
partnership with **(Ink). Social Design. Netherlands**

THE TEAM

The project at different stages involved different people with expertise in separate fields which includes but is not limited to designers, researchers, behavioural scientists, architects, & engineers.

Mayank Raj
Design + systems

Anna Noyons
Design + systems



Saansh Arora
Design + systems

Srishti Shankar
Research + Behaviour

Vedangi Rane
Research + Comms

Jugaadh Lamba
Urban Research

Twan
Design

Gatim Sachdeva
UI/UX & Technology

Mohd Amaan
Research

03

HOW WE WORKED

Four kinds of research, used in combination. None is treated as sufficient on its own; each is used to test, qualify, or extend the others.

HOW WE WORKED

The study draws on four kinds of research, used in combination. None is treated as sufficient on its own; each is used to test, qualify, or extend the others.

Research type	What it provides	How it is used here
Secondary research	Academic literature, policy documents, and institutional reports on water in Delhi.	To establish the empirical baseline (distribution vs scarcity, gendered burden, infrastructural failure rates) and to identify gaps that field research can address.
Ethnographic field research	Direct observation of practice, conversation with residents, and documentation of physical adaptations on site.	As the central method. Used to understand how water is actually obtained, stored, shared, and paid for in Pahari.
Observational mapping	Visual and spatial documentation, photographs, sketches, route mappings, and land-use surveys.	To anchor field findings to specific sites, lanes, and buildings. Allows observations to be checked against, and read alongside, the morphology.
Long-form resident interviews	Sustained conversations with individual residents about their own water situation.	To surface the lived political reading of water how residents themselves describe the chain from supply failure to corruption to a sense of basic right.

ETHNOGRAPHY

What it means here

Ethnography here means on-site observation of how a community organises everyday life around water. The unit of attention is practice what people do, with what objects, at what rhythms, with whom. The brief's questions can't be answered by surveys; practice has to be watched.

What this is not

No household surveys, no quantitative sampling, no claim to statistical representativeness. Statistical figures cited come from secondary sources. Not classical participant observation either, the team has not taken up residence in Pahari; work is across structured field visits.

Techniques used

Walk-along observation. Walking specific lanes at different times — when water was and wasn't flowing — to see how its rhythm shaped the lane's. Surfaced the morning queue, staged storage cans, and the mid-morning disappearance of water.

Object documentation. Photographing and describing the objects of daily water work — cans, the household bicycle, motor pumps, rooftop tanks, the kua, harvested-water shopfronts, the mosque tap. The same object plays different roles in different lanes.

Mapping with residents. Mapping sources, timings, and routes alongside residents — checking the team's observations against theirs. Used to identify which mosques, boring-water shops, and neighbours' taps serve which streets.

Long-form resident conversation. One sustained, unstructured conversation with a long-term resident produced the ten-theme account in §13. The resident's own ordering — condition, politics, principle, demand — was preserved as a finding.

Synthesis sessions. Between visits, observations were clustered on a shared canvas and tested against subsequent visits. The canvas is the working artefact.

04

PROCESS & THEMES

observation of the study clubbed with insights, counted in people, in hours, and in the demand the formal system does not see.

WHAT WE DID | TRIANGULATING WHAT THE LITERATURE SAYS WITH WHAT THE FIELD SHOWS

The slides that follow take each major fieldwork finding and read it against the academic, policy, and journalistic record on Delhi water.

For each finding, three things are noted:

What the literature says, what the published research already establishes.

What we saw in Pahari Kua, what the team observed directly.

What is new in the field, what emerged in our work that the existing literature does not capture.

This is how the study earns its conclusions. Where the field merely confirms the literature, the finding is well-supported but not original. Where the field adds something the literature misses, that addition is the contribution of this study.

Each slide is tagged with the relevant theme from the previous slide.

THEMES THAT RUN THROUGH THE FIELDWORK

Across the supply system, the demand picture, the resident interview, and the daily observations, five themes recur.

Every section of this report is, in some way, a version of one of these.

01 · Distribution, not scarcity, The volume of water reaching the ward is not the binding constraint. The way it is distributed, across lanes, floors, hours, and households is. The same water that floods a main lane is unavailable in the gali behind it.

02 · Time, not just supply, Water in the ward is governed less by quantity than by when.
A 90-minute window twice a day decides everything that follows. The household that can capture the window thrives; the household that cannot, queues, pays, or goes without.

03 · The vertical city, on a flat-city pipe, Pahari kua is a four-storey settlement served by infrastructure designed for a single-storey one. The motor pump is universal precisely because the network was never re-engineered for height. Every floor above the second is, in water terms, an act of improvisation.

04 · The body bears the system's gaps, What the pipes do not deliver, women carry. What the storage cannot hold, the body absorbs — through queueing, lifting, postponing, washing less, drinking less. The supply system has a labour subsidy, and that subsidy is gendered.

05

FINDINGS & INSIGHTS

Themes that recur across the supply system, the demand picture, the resident interview, and the daily observations.

THEME 01

DISTRIBUTION, NOT SCARCITY.

The volume of water reaching Pahari Kua is not the binding constraint. The way it is distributed across lanes, floors, hours, and households is.

FINDINGS AND OBSERVATIONS

The slides that follow take what the fieldwork in Pahari Kua produced and read it against the academic, policy, and journalistic record.

Each finding is presented as one of three things: **a confirmation of what the literature already establishes,**

a sharpening of what the literature implies but does not document at this scale, or a new observation that the literature does not capture.

The thematic tag at the top of each slide indicates which of the five themes (see previous section) the finding sits under.

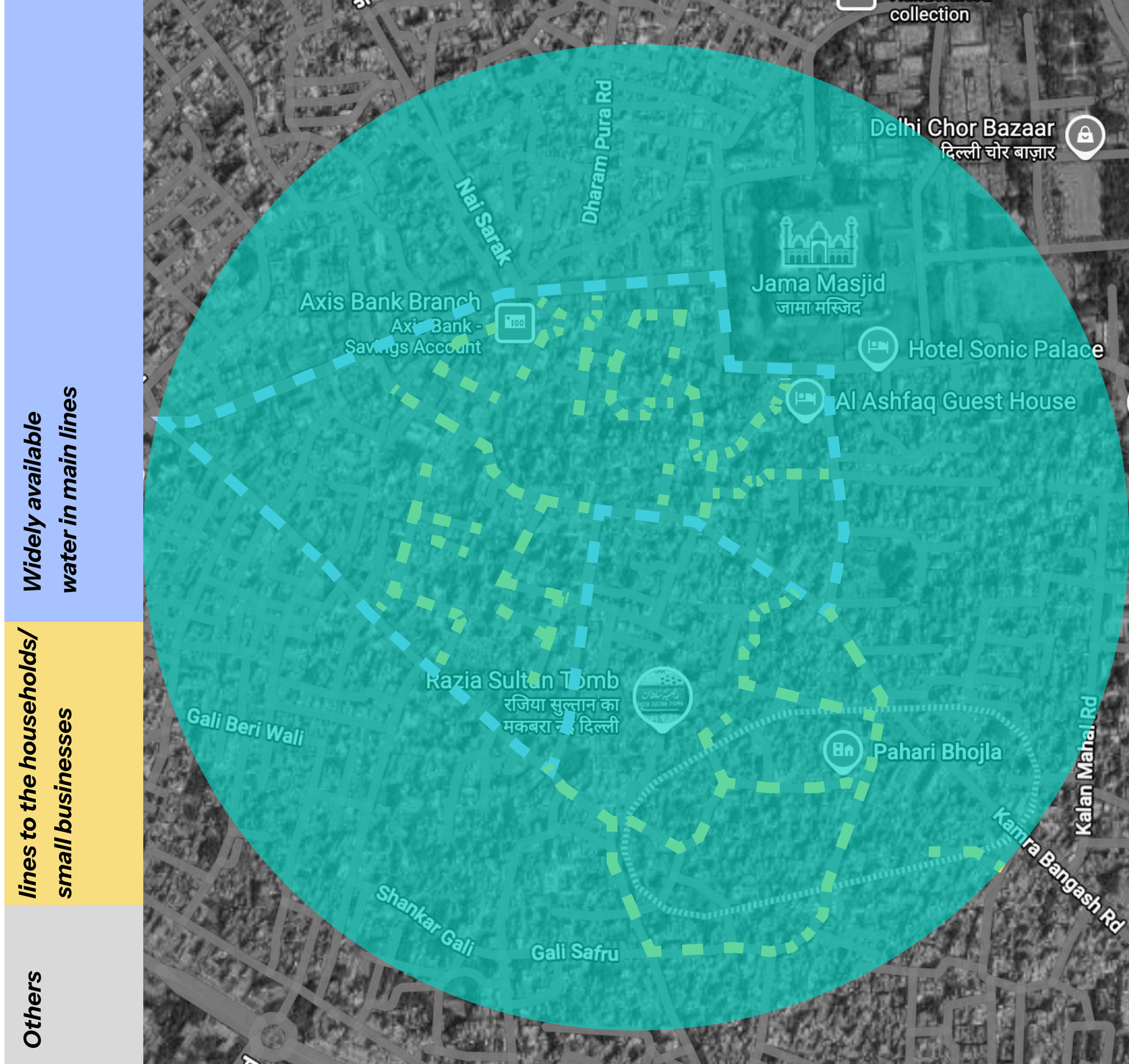
01 · DISTRIBUTION, NOT SCARCITY

The volume of water reaching Pahari Kua is not the binding constraint. The way it is distributed across lanes, floors, hours, and households is.

The main lanes are over-served.

The interior is under-supplied. Water is widely available in the main lanes and is often used at greater volume than necessary. A few metres in, the same supply does not arrive at all. The geography of the lane decides the volume of the household.

Boring water is now layered onto MCD supply.
Water is reported as diverted.
Quality is itself a distribution problem.



01 · DISTRIBUTION, NOT SCARCITY

The volume of water reaching Pahari Kua is not the binding constraint. The way it is distributed across lanes, floors, hours, and households is.

The main lanes are over-served.

Boring water is now layered onto MCD supply.
Households increasingly run motor pumps simultaneously with municipal supply to increase flow at the tap. This raises throughput for the connected household at the cost of system stability — and pulls heavily from the same aquifer the ward depends on. Groundwater is reported to be rapidly depleting

Water is reported as diverted.
Quality is itself a distribution problem.

01 · DISTRIBUTION, NOT SCARCITY

The volume of water reaching Pahari Kua is not the binding constraint. The way it is distributed across lanes, floors, hours, and households is.

The main lanes are over-served.
Boring water is now layered onto MCD supply.

Water is reported as diverted.

Residents describe water being redirected by particular individuals and groups inside the lane, deepening the gap between neighbours. Complaints to authorities draw visits, not resolution. Distribution failures here are not only structural; they are also actively produced.

Quality is itself a distribution problem.

01 · DISTRIBUTION, NOT SCARCITY

The volume of water reaching Pahari Kua is not the binding constraint. The way it is distributed across lanes, floors, hours, and households is.

The main lanes are over-served.
Boring water is now layered onto MCD supply.
Water is reported as diverted.

Quality is itself a distribution problem.

Supplied water is reported to contain ammonia and other contaminants. Infections attributed to water are spoken of as routine. The water that does arrive does not arrive in the same condition for everyone — drinking water for many residents comes from outside the formal pipe altogether.

THEME 02

TIME, NOT JUST SUPPLY.

Water in the ward is governed less by quantity than by when. A short daily window decides everything that follows.

02 · TIME, NOT JUST SUPPLY

Water in the ward is governed less by quantity than by when. A short daily window decides everything that follows.

The ward's water disappears by noon.
On many days, the area's allocation is consumed before midday. Households time their entire morning around this. The household that can capture the window thrives; the household that cannot, queues, pays, or goes without.

The seven-source hierarchy is a time hierarchy.

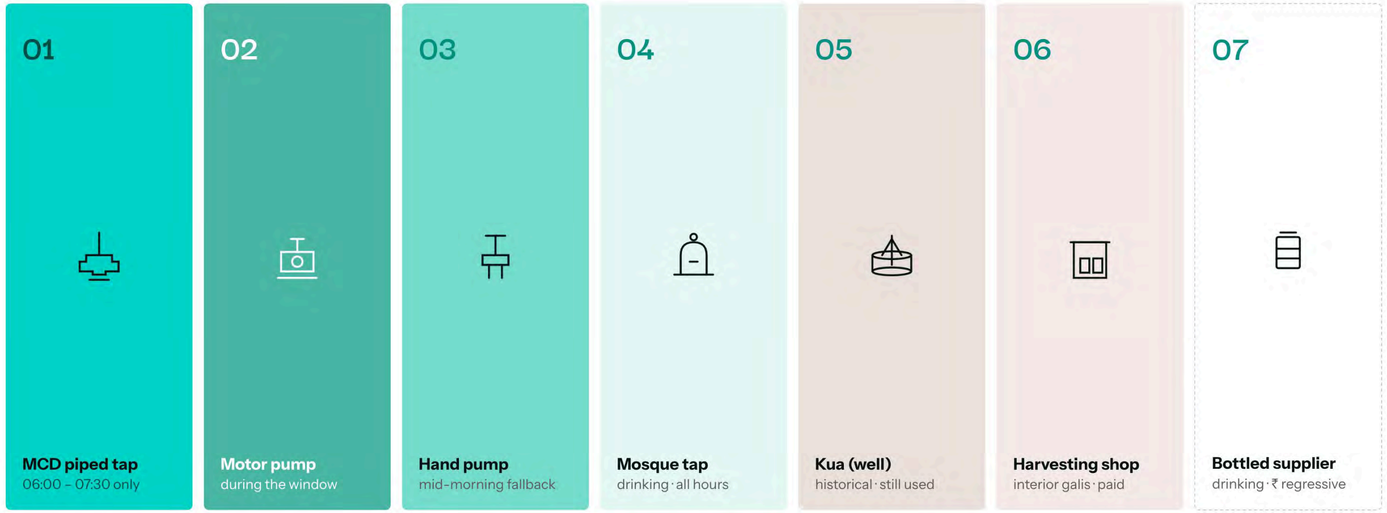
02 · TIME, NOT JUST SUPPLY

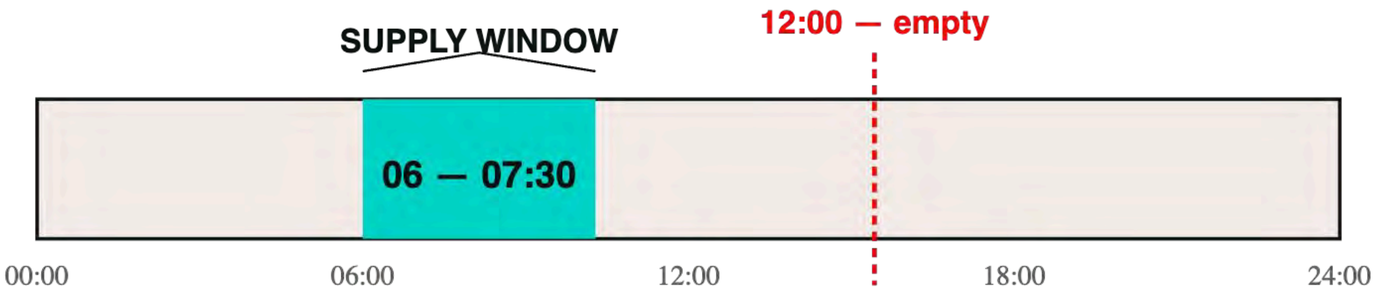
Water in the ward is governed less by quantity than by when. A short daily window decides everything that follows.

The ward's water disappears by noon.

The seven-source hierarchy is a time hierarchy.

Residents move between MCD piped supply, motor pumps, hand pumps, mosque taps, kuas, water-harvesting shops, and local suppliers, not because each source is preferred, but because each is available at a different hour. The hierarchy documented through walk-along observation is, read another way, a clock.





90 minutes in, 22 ½ hours out.

THEME 03

THE VERTICAL CITY, ON A FLAT-CITY PIPE.

Pahari Kua is a four-storey settlement served by infrastructure designed for a single-storey one. Every floor above the second is, in water terms, an act of improvisation.

03 · THE VERTICAL CITY, ON A FLAT-CITY PIPE

Pahari Kua is a four and above storey settlement served by infrastructure designed for a single-storey one. The network was never re-engineered for height or density; every floor above the second is, in water terms, an act of improvisation.

Roughly 40 people share a single connection in many buildings.

This is well above the design assumption the network was built around. New construction has continued to exceed the design loads of the pipes beneath it.

The motor pump is universal because the pipe cannot reach upward.

Building codes are not in step with use.

Morphology forecloses harvesting.

03 · THE VERTICAL CITY, ON A FLAT-CITY PIPE

Pahari Kua is a four and above storey settlement served by infrastructure designed for a single-storey one. The network was never re-engineered for height or density; every floor above the second is, in water terms, an act of improvisation.

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The motor pump is universal because the pipe cannot reach upward.

This is well above the design assumption the network was built around. New construction has continued to exceed the design loads of the pipes beneath it.

Building codes are not in step with use. Morphology forecloses harvesting.

03 · THE VERTICAL CITY, ON A FLAT-CITY PIPE

Pahari Kua is a four and above storey settlement served by infrastructure designed for a single-storey one. The network was never re-engineered for height or density; every floor above the second is, in water terms, an act of improvisation.

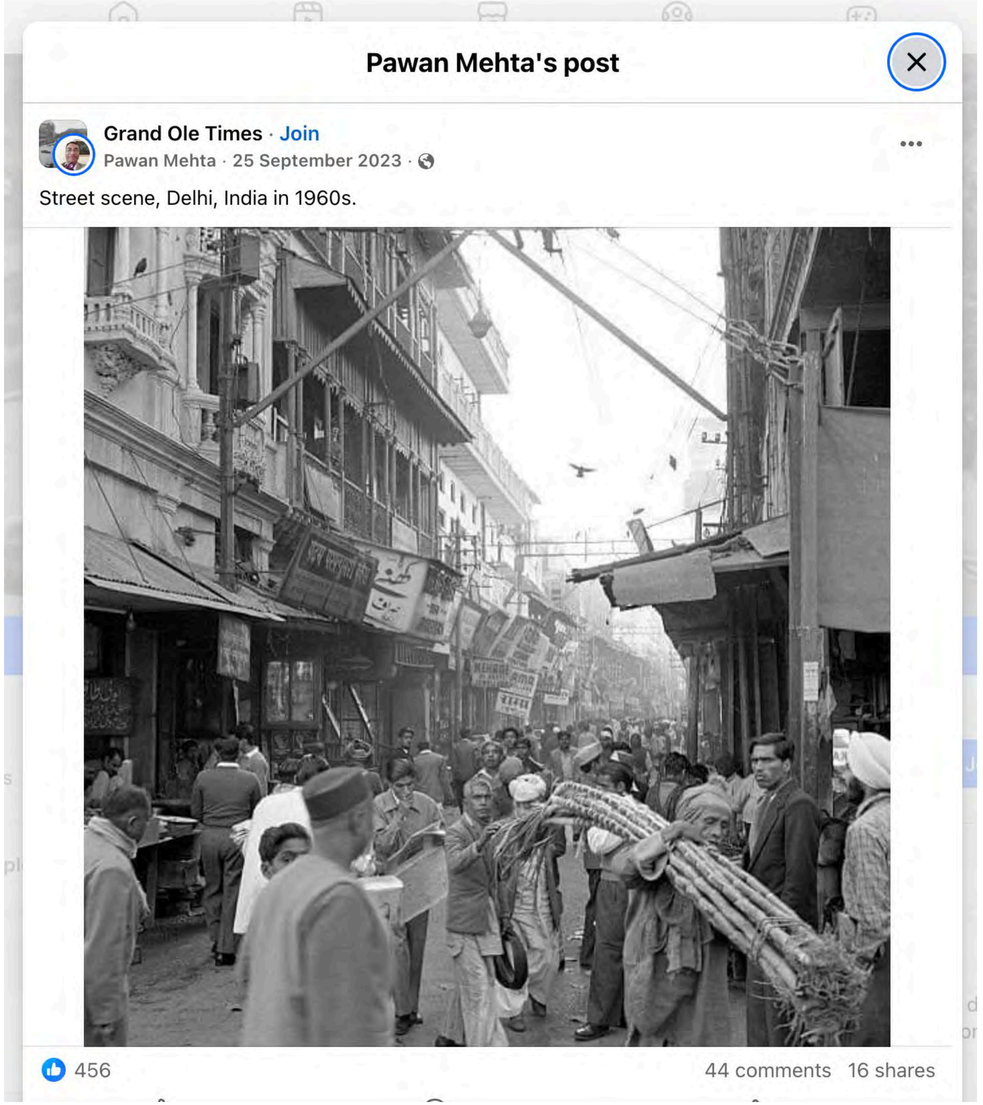
Roughly 40 people share a single connection in many buildings.

The motor pump is universal because the pipe cannot reach upward.

Building codes are not in step with use.

Construction has moved faster than the rules that govern it, and faster than the infrastructure beneath it. The ward today is being asked of a network that was designed for the ward of fifty years ago.

Morphology forecloses harvesting.



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Morphology forecloses harvesting.

The built form leaves almost no horizontal surface for rainwater harvesting. Rooftops are crowded; roof-to-roof distances are minimal. The vertical city is also a city without catchment.

THEME 04

THE BODY BEARS THE SYSTEM'S GAPS.

What the pipes do not deliver, women carry. What the storage cannot hold, the body absorbs, through queueing, lifting, postponing, washing less, drinking less.

04 · THE BODY BEARS THE SYSTEM'S GAPS

A. Women carry the primary daily labour of water.

Storage, and household distribution fall disproportionately on women in the household. This is corroborated by the academic literature, the resident interview, and direct field observation.

B. The economy of water is regressive.

Average earnings in the area are around ₹200 per day per person. Most residents buy drinking water from local suppliers — a substantial share of daily income spent on water that is, formally, supposed to be free or near-free. The poorer the household, the larger the share.

C. Contamination is absorbed before it is addressed.

Ammonia and other contaminants are described as routine. The cost is paid before any complaint is filed — in infections, in lost days of work, in the additional purchase of bottled water for those who can afford it and the additional risk borne by those who cannot.

THEME 04

THE COMMUNITY IS THE REDUNDANCY.

Mosques, older sources, and harvesting shops fill what the formal system does not deliver and have been doing so longer than the pipe has existed.

05. THE COMMUNITY IS THE REDUNDANCY

01

Mosques function as public water points.

Drinking water for many residents comes from outside the mosques. Where the formal system does not deliver potable water, the mosque does — and has been doing so longer than the pipe has existed.

02

Older water sources remain in active use.

The kua and the hand pump have not been replaced by the network; they have been absorbed into the daily hierarchy alongside it. Informal and formal sources sit on the same lane, used at different hours by the same household.

03

Water-harvesting shops fill the spatial gaps the pipe cannot.

They sell water inside the dense interior where pipes do not reach — a quasi-formal layer that redistributes water (often boring water) into the part of the ward the network was never extended into.

05. THE COMMUNITY IS THE REDUNDANCY

04 05 06

The community is tightly knit, and tightly dependent.

Residents describe their lanes as ghettos in the literal, neutral sense — communities that depend on one another for water access. Cleanliness, waste management, and water-sharing are maintained by long-term residents; the social fabric that makes shared access work is itself an asset of the ward.

Long-term and short-term residents play different roles in this redundancy.

Long-term residents are the custodians of the water knowledge, they know and understand the usage and distribution of water. Short-term residents place demand on the same network but typically sit outside the arrangements that govern sharing. members faster than they can absorb them.

Society related observations and their link to the study.

Field observations consistently noted that strain on water-sharing, sanitation, and lane cleanliness rises with the share of short-term residents in a building. This is not a comment on individuals; it is a comment on what happens when collective arrangements receive members faster than they can absorb them.

06

SYNTHESIS & PLANNING

Three lenses to read the findings through, and four planning points that follow from them.

THREE THEMES CONSTANT IN EVERY FINDING

Not what we found — how we read what we found.

Water dignity.

How water access is tied to how people are seen, by neighbours, by service providers, and by themselves. Access is not only physical; it is social, and the social cost is rarely neutral.

“What would a water point look like if collecting from it carried no social cost?”

“What could give back the hours the household loses waiting for water to arrive?”

Where responsibility sits. Which parts of the water system are within the household's control, which are within the community's, and which are within the institution's. The lens matters because the conventional water debate collapses these three — treating community practice as a private failure and institutional failure as a personal misfortune. The study insists on keeping them separate.

Time, not volume. The day in Pahari Kua is structured by when water arrives, not by how much. The lens reads every finding for its temporal shape — the morning window, the afternoon shortage, the night-time storage, the seasonal failure. (Confirm this is the third lens — your uploaded slide showed only two.)

“What would make the layers visible to each other, so failure in one is not absorbed by another?”

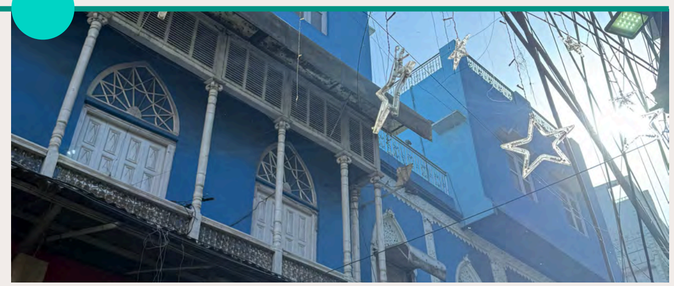
CRUCIAL POINTS FOR EFFECTIVE PLANNING

01

01 Water-time versus clock-time.

The gap between when the community needs water and when the supply arrives is the single most actionable variable in the system. The pipe runs on a municipal clock. The household runs on a domestic clock. The opportunity sits in the space between them — in storage, in scheduling, in signalling, in any intervention that brings the two clocks closer.

02



02 Verticality and the idea of floors.

The piped network was designed for a flatter city. The ward today is three to four storeys deep and rising. Every intervention has to take this seriously — both the engineering fact (motor pumps are universal, failures are vertical) and the social fact (the cost of the climb falls on the same people who carry the can).

> **In the world, water keeps moving long after it leaves the pipe: through time, up floors, across labour, along routes. The question is who has been carrying it, and what that asks of the people who shape the lane.**

CRUCIAL POINTS FOR EFFECTIVE PLANNING

01

03 Women. Across the field observations,

the academic literature, and the resident interview, the same finding recurs: women carry the primary daily labour of water. This finding is consistent with a substantial body of work on water and gender in South Asia and is not unique to Pahari Kua, but it is acute here because the area's verticality and lane density. The same body that carries the can also climbs the stairs.

02

04 Commuters and moving networks.

The water in the lane has to accommodate people the formal system does not count. Three commuter typologies were identified in the field mapping. People with moving networks — vendors, e-rickshaw drivers, hand-cart operators — businesses that travel with the person and need water wherever the person is.

If time and height are how water moves, labour and route are who moves it. The question is what design owes to the people the pipe does not see.


NO
RKING
ड़ी करना मना है।
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