# Shifting Margins: Visibility & Invisibility of Peri- Urban Yamuna Farmers

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#### **Abstract**

This paper discusses the impact of urbanization and development of Delhi on the peri urban farmers living on the banks of the river Yamuna. The river, which was traditionally a community managed resource, has over the years been transformed to one that is restricted and regulated to accommodate the 'modern' development paradigm. We explore how this has impacted farmers who live on the khadar (floodplains) of the Yamuna and cultivate the land. The traditional practice of cultivating the khadar has been deemed illegal and the farmers rendered encroachers. Typically, the cultivators of the khadar do not own the land they cultivate, but some of them claim rights of cultivation dating back to 1857. The cultivation practices and lives of this riparian community are synergistic with the ebb and flow of the river. We argue that for the Yamuna to thrive these communities need to be viewed from the posthumanist lens rather than the lens of the Anthropocene.

**Keywords:** Peri-urban farmers, riparian, floodplains, Yamuna, Anthropocene, posthumanist

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#### 1. Introduction

The plight of the Yamuna draws attention from academicians, activists and policy makers alike, but to little effect.<sup>3</sup> The view of the river at various points in its course through the city is testimony to the state of the river. Near Rajghat, midway through its course in Delhi, one can see green fields with huts and people working on the fields. At the Kalindi Kunj Bridge, close to where it exits Delhi, the river is covered with white foam, and smells like a sewer. The sight of fields within a burgeoning megacity is, to us, as much of a curiosity as the plight of the river is vexing. We start from the position that the farming communities working these fields are important stakeholders in matters pertaining to the Yamuna. In this preliminary study, we examine the interaction between them, the city at large, as well as the state, to gain insights for better management of the Yamuna, at least some of which may be generalized beyond the Yamuna in Delhi.

We situate this paper in the literature that seeks to unpack the reasons for the ineffective management of the river by the various stakeholders whose very survival depends, directly or indirectly, on the river. At the outset, we emphasise that we view the river as a composite of its water channels and floodplains. Extreme variability in the volume of water and sediment is intrinsic to tropical rivers, causing the riverfront to be a shifting space (Mondal, 2021). A realistic conceptualization of the river needs to accommodate this. The 'commons' nature of the river also needs emphasis - excluding the 'use' of the river either as a resource or as a sink is difficult. However, this use is ultimately 'rival' in nature. Overuse by some (upstream users of water, as an obvious example; or excessive discharge of pollutants by some) will leave others with less 'river' available.

Bhatia and Kumar (2016) discuss the relationship of the river Yamuna with the inhabitants of the urban megalopolis Delhi. They conclude that inhabitants of Delhi including the villagers on the banks of the river Yamuna have turned their backs on the river. The villagers, whose voices are heard, view the river as a nuisance. The demand for any kind of action for cleaning the river or managing the river water does not appear to be a priority for these communities. The solutions proposed by the state for managing and cleaning the river are top-down decisions which do not involve local communities, and

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<sup>&</sup>lt;sup>3</sup> See for example, Progress Report, 14 February 2023, Rejuvenation of the River Yamuna, Department of Environment, GNCT, Delhi, <a href="https://www.dpcc.delhigovt.nic.in/uploads/pdf/RRC\_Actionplan\_feb2023.pdf">https://www.dpcc.delhigovt.nic.in/uploads/pdf/RRC\_Actionplan\_feb2023.pdf</a>

may in fact come into conflict with them. The development of 'public goods' like the metro, bridges or sewage treatment plants or walking tracks has historically been done by acquiring lands from villages in the Delhi region.<sup>4</sup>

We question the developmental paradigm which is at the cost of the river and the community living on the banks of the river. Interestingly, most communities of villagers living on the banks of the river Yamuna in Delhi are difficult to characterize as 'riparian'. Their connection with the river is minimal. The set of policies to manage, govern, clean, channelize, beautify and use the river and river water are the domain of the state. This paper uses secondary literature to study the plight of the few riparian communities that do live on the banks of the river Yamuna. It is organized as follows: Sections 2 and 3 explore the framing of the Yamuna and its floodplains in policy. Sections 4 and 5 discuss the periurban farming communities that cultivate large portions of the Yamuna's floodplains in Delhi. Section 6 describes the 'illegalization' of these communities. Section 7 concludes.

#### 2. The Yamuna in Delhi

The Yamuna, as mentioned earlier, is quintessentially of 'commons' nature - non-excludable but rival in consumption. It is thus susceptible to the tragedy of the commons. Locating and viewing the river in the context of the Institutional Analysis and Development (IAD) framework suggests that the best way to regulate and prevent the 'tragedy' is to involve the ordinary citizens, resource users and local communities who know more about managing common property resources (CPR) than politicians and bureaucrats. Monocratic governance structures set up by a government often do not provide effective and sustainable CPR solutions (Dolsak, N., & Ostrom, E. 2013; Hoffman, R., & Ireland, D. 2013; Ostrom, 1990). While this may be true in general, to 'ordinary citizens' in a megalopolis like Delhi the 'supply' of the river *viz* as a source of drinking water and as a sewage sink is mediated through the state. The state has effectively separated resource users from the river - but seems to lack the political will and resources to effectively 'manage' the river itself. Villagers, who one assumes would

<sup>&</sup>lt;sup>4</sup> Sharan (2014)

<sup>&</sup>lt;sup>5</sup> Bhatia and Kumar (2016) also mention the *dheevars*, a fishing community which can be viewed as a riparian community. Interestingly, however, it is also Sanskritising itself to claim a higher social status by giving up certain traditional practices like fishing and fish-eating.

constitute a riparian community by virtue of living on the banks of the river for generations, also appear to have weak ownership of, or relationship with, the river. Their lives are largely independent of the river. The river typically matters to them when it floods or when it is time to venerate the river. They do claim that the river demands sacrifice (when people drown during floods) from them every year but the sacrifice is always from another community that does not live on the banks. Their relationship with the river is not a part of the everyday and the ordinary. Thus the river is acknowledged in extraordinary times of distress or celebration. Their "connections to the river are tenuous at best and non-existent at worst" (Bhatia and Kumar, 2016. p. 30).

On the other hand, the state has assumed effective proprietorship of the river, and 'allocates' it to various users based on historical and past usages. The allocation is often based on political will and bargaining. Himachal Pradesh, Uttar Pradesh, Uttarakhand, Haryana, Rajasthan, and Delhi share the waters of the Yamuna. The bulk of the river waters are diverted into the Western and Eastern Yamuna Canals at Hathnikund, so that the river that reaches Delhi is severely depleted. In Delhi almost thirty odd drains pour untreated sewage in the Yamuna (Dixit, 2019). Further, the management of the river is almost completely bereft of appropriate and rational regulation.

The state's view of the river is divisive rather than composite. The river is managed by several government bodies and also by the state and central governments. The flooding of the Yamuna in 2023 is a classic illustration of the lack of coordination between the state governments of Punjab, Haryana and Delhi. On July 10, 2023, an official from the Delhi Jal Board had said: "The reason behind this surge in water level is the release of more water into the Yamuna from the Hathnikund barrage upstream in Haryana. Incessant rainfall has taken place in northwest India over the last three days with many areas in Jammu and Kashmir, Uttarakhand, Himachal Pradesh, Haryana, Uttar Pradesh and Rajasthan recording heavy to extreme precipitation" (Zumbish, 2023). The lack of disaster relief preparedness of various states including Delhi led to flooding and loss of life and property. Disputes about water sharing between states are the norm. The Yamuna in Delhi is also managed by several government agencies. The fifty two

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<sup>&</sup>lt;sup>6</sup>Yamuna flows through Uttarakhand, Uttar Pradesh, Himachal Pradesh, Rajasthan, Haryana, Delhi and Madhya Pradesh. Disputes between Delhi and Haryana have been the most contentious. The Delhi government has also been in dispute with Haryana for release of Yamuna water for drinking purposes. (Times Now, 2019; Business Standard, 2018)

kilometres from Palla (where the river enters Delhi) to Jaitpur (where it exits Delhi) are managed by multiple government institutions like the Upper Yamuna River Board, Delhi Development Authority (DDA), Delhi Jal Board (DJB), the Police and Irrigation and Flood Control Department. The land around the Yamuna in Delhi belongs to the Government of India and DDA. Lack of coordination between these agencies exacerbates the problem.

### 3. The Signature of the Anthropocene on the Floodplains

The land-use patterns around the Yamuna have been changed significantly by the state to allow for construction activities as Delhi has grown. Examples are: the construction of the Commonwealth Games Village (CGV) on the riverbed, the Millennium bus depot, the Ring Road Bypass and several other such legally sanctioned and permitted state sponsored projects (Bhatia & Kumar, 2016). In 2010, at the time of the Commonwealth Games<sup>7</sup> the state in Delhi undertook several large-scale developmental projects on the banks and the floodplains of Yamuna. These projects were state funded; some of these were also Public Private Partnership (PPP) projects. The stated overall objective was to 'beautify' the river and to make it 'usable for the general public'.

Construction on the ecologically sensitive riverbed was not without hiccups. It is a saga of development in the age of Anthropocene (for more see Bowden, 2017; Pries, 2022), at the cost of damaging the living and fragile ecosystem and the river itself. The Delhi Development Authority (DDA) commissioned two studies about five years apart by the National Environmental Engineering Research Institute (NEERI) in 1995 and 2000 to study the feasibility of building on the river bed. In both the reports NEERI advised against any permanent construction for residential, commercial, recreational or beautifying purposes. The DDA however, ignoring these recommendations chose to follow the suggestions of the Pune based Central Water and Power Research Station, according to which fifteen percent of the land on the river bed was 'unviable'. However, this report was vague on the construction of permanent structures. DDA decided to

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<sup>&</sup>lt;sup>7</sup> The XIX Commonwealth Games were held in Delhi in 2010. This is an international sporting event where mostly the former territories of the British Empire participate. It is held every four years. (Raikar, 2024)

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proceed with constructing the CGV. In 2007, DDA again commissioned a study by NEERI for the feasibility of constructing on the riverbed. Interestingly by 2007 the NEERI report said that the area that was earlier the floodplain was now no longer the floodplain since for the Akshardham temple a bund had been constructed thus reducing the floodplain. DDA interpreted the NEERI report to mean that the floodplain was no longer the floodplain and thus could be used. However, the report also said that "Just because a bund has been built does not mean that the riverbed ceases to be a riverbed. A floodplain remains a floodplain and a precedent like this opens up the whole riverbed to more constructions," (Ghosh, 2008). The selective interpretation and blindness to state sponsored reports and recommendations is an illustration of the developmental saga that we discuss in the case of peri urban farmers. These developments brought forth several changes in Yamuna's landscape. There has been a gradual change in the nature of access to the river—from largely a community-managed resource, to restricted and regulated private use.

As a part of showcasing Delhi for the Commonwealth Games, the state conceptualised the construction of the Signature Bridge. After several delays due to various reasons the Signature Bridge was inaugurated in 2018. This is an eight-lane bridge and is six hundred metres downstream from the older Wazirabad Bridge. The official reasons for building the bridge are both practical and aesthetic. The bridge was built to accommodate the growing volume of traffic and to connect north Delhi with east Delhi. The bridge that was proposed for practical reasons soon became an 'aesthetic signature' for Delhi. Built along the lines of bridges on the River Seine in Paris, Venice and Italy and the Rotterdam Bridge in the Netherlands, the Signature Bridge provides a panorama of the 'scenic' Yamuna and Delhi. It is twice as high as the Qutub Minar. It is built in the shape of a *namaste* and has four elevators and a 154 metres high glass box for viewing Delhi in all its glory (Zee Zest, 2023).

In effect, the Bridge is a giant signature of the age of the Anthropocene. It is built over the floodplains even though environmentalists had urged the state to conduct an Environmental Impact Assessment before undertaking the project. They warned about the disastrous consequences of the bridge on the floodplains and the fragile ecosystem (Chakravarty, A., 2015). The State Environment Impact Assessment Authority (SEIAA) gave clearance for the bridge with the caveat that there should be no construction waste

dumping on the riverbed and at no point should the river's flow be obstructed. Environmentalists point out the gross violation of the SEIAA strictures by the authorities. CR Babu, Professor Emeritus and Head of the Centre for Environmental Management of Degraded Ecosystem (CEMDE) at Delhi University, said "All the pictures show that it is a clear violation of the conditions laid down in the EC (Environmental Clearance). Debris has been dumped into the river and the river's flow has been obstructed. It is also clear that a road has been built below the bridge so that heavy machinery can move in" (Thakur, 2019).

As in the case of the other state approved constructions on the flood plains the recommendations were ignored. The bridge was built with consequences for the ecosystem which also includes the riparian community of farmers living on the banks of the river Yamuna. Delhi's pride and symbol of modernity the Metro too has been guilty of raising, filling, levelling and enclosing 4800 square feet of the riverbed for the Majlis Park-Maujpur Metro line (Pradhan & Chetan, 2020).

The Signature Bridge is perhaps the one of the more spectacular structures spanning the Yamuna, but it is by no means the last such structure to be built. Over the last decade, several new construction projects have been undertaken or have been sanctioned, including a new rail-cum-road bridge parallel to the Old Iron Bridge (See, e.g., Doomra, June 28, 2019). The gigantic signature of Delhi's expanding urbanisation on the ecology of the Yamuna deserves attention. Urban farming and farmers are an important part of this ecology. In the sections that follow, we discuss the changes brought by riverfront development by focusing on the farmers inhabiting Yamuna's floodplains in Delhi. We ask questions about the nature of the relationship of these communities with the river. We also focus on the impact of the changes on the floodplains on the lives of these riparian communities.

# 4. Living on the Floodplains: Farmers in the Shadow of the Signature Bridge

The expanding megalopolis of Delhi has progressively displaced agriculture in the city. Currently, Delhi has about three lakh hectares of farming across 112 villages. Farm size in Delhi is small and for 97% farmers it is less than 0.5 hectares (Farooq, 2023). Farming

takes place mostly in the floodplains or *khadars* in the northwest, southwest and northern regions. Traditional agricultural lands in Delhi lie in both 'rural' and 'urban' zones. Farming in the rural zones is not an issue but farming in the 'urban zones' in the twenty-two kilometres extending from Wazirabad in the north to Okhla in the south, along the Yamuna, has been labelled 'encroachment'. Chilla Khadar, Madanpur Khadar, Jagatpur, Palla, Bela Estate are some of the agricultural areas in Delhi. Seasonal vegetables are grown by farmers living on the floodplains. These cultivators are typically migrants from Bihar, Uttar Pradesh, Jharkhand and West Bengal, often traditionally agriculturalists who have migrated for improved livelihood (Farooq, 2023).

Eighty percent of Delhi's food<sup>8</sup> supply is sourced from other states (Kumar & Behera, 2023). Urban farming has emerged as an important part of the city. There is a growing movement for urban agriculture to provide fresh, organic produce to citizens. The Master Plan for Delhi (MPD) 2041 mentions urban farming, but there is no provision for these farmers. Most of the agriculture in the Yamuna floodplains falls in Zone O (Sharma, 2023, July 18). As per Master Plan 2021, Zone O includes the twenty-two kilometres floodplains from Wazirabad to Palla over 10,000 hectares. This zone has further been divided into Zone O-I which includes the active floodplains and the non-built-up areas and the riverfront, Zone O-II which includes the built-up areas. The Yamuna riverfront is to be developed as a part of the urban beautification plan as a part of the Central Vista Redevelopment Plan (Press Information Bureau, November 22, 2022). Twenty-two kilometres of the Yamuna floodplains is to be developed for recreational activities, public facilities and biodiversity parks. This is an attempt to 'revive' the floodplains and to increase the footfall on the Yamuna. The development of the riverfront is along the lines of other riverfront projects in Ahmedabad on the Sabarmati River, the Ganges, Mithi etc (PCR India, 2022). The MPD 2041 includes urban farming but the official documents do not have any provision for farming and agriculture. As per the plan agricultural activities will be banned in this area. The Delhi government in 2022 launched a campaign to promote urban farming but the proposal is for urban farming in farmhouses, terraces, backyards, balconies etc. It does not include any plans for the traditional farmers of Delhi (MPD 2041, 2020).

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<sup>&</sup>lt;sup>8</sup> Fifteen percent of the vegetables, sixty percent of meat and twenty five percent of milk are sourced locally (Kumar and Behera, 2023).

# 5. The Impact of Riverfront Development on Farmers

The riverfront development project is proposed on the land that is presently being used for agriculture. The ban on agriculture in the Yamuna floodplains has rendered the farmers vulnerable. There is a constant threat of eviction and displacement (Farooq, 2023).

A National Green Tribunal (NGT) Report, published in 2020 stated that the vegetables grown by the farmers on the Yamuna floodplains were toxic. Reports by the Central Pollution Control Board (2020) have also found high levels of toxicity in the vegetables. The NGT ordered DDA to stop all cultivation of vegetables by 2020. DDA plans to use the land for planting trees like the Indian blackberry and guava (Banerjee, 2023).

Currently, irrigation on the floodplains is through borewells and hand pumps. But some farmers do use water contaminated with sewage. The farmers at Madanpur Khadar used water contaminated with solid waste and they claimed that vegetables grown in this water are shinier and brighter. They called this *moot ka paisa* which translates to money from sewage (Bhatia & Kumar, 2016). The Yamuna itself is contaminated with thirty odd drains emptying into the river. Toxicity levels of the Yamuna are very high because of industrial effluents and the discharge of sewage. The drains at Najafgarh and Chandini Chowk empty directly into the river. Colonies like the Tibetan Refugee Colony at Majnu Ka Tila (MKT) discharge waste water directly into the river. This colony also has no sewage and the sewage is also directly emptied into the river. The farmers who cultivate the land next to the Tibetan Colony at MKT use this waste and sewage water for irrigation through ducts. These farmers also use the open wastewater drains for defecation and other purposes (Tata Centre for Development at University of Chicago Trust, 2020).

The farmers of the Yamuna floodplains live under the ever-present threat of eviction with the DDA frequently demolishing their huts and displacing them. There is a constant conflict over the land. The DDA claims that the land is theirs but the farmers of the Yamuna floodplains have been cultivating the land since the 1950s. The DDA uses bulldozers to destroy their houses and harvests. Most of these farmers are tenants. Rahul, a migrant from Uttar Pradesh who cultivates the land near the Signature Bridge and lives

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there said, "The officials came with a huge police force and 5 to 6 tractors and bulldozers. They have threatened us that they will come again" (Mondal, 2021). A similar story is of Pushpendra whose fields were demolished and the DDA promised to come back in August but they never showed up. In the meantime, Pushpendra's family has planted vegetables (Pradhan & Chetan, 2020). Life continues in these uncertain threatening times with the eviction sword hanging over them. Most of these farmers are tenants who pay an annual rent to the farmers who had leased land on the floodplains from the state in 1949 (as discussed in the next section). For instance, the farmers at the floodplains at MKT have been cultivating the floodplains since 1982. They pay an annual rent of Rs. 6000 to 35,000/ depending on the size of the land. Their landlords are farmers in the nearby village of Jagatpur<sup>9</sup> (Tata Centre for Development at University of Chicago Trust, 2020).

There are about 3000 jhuggis and about 5600 people as per one estimate. "We are not obstacles," said Singh. "We can be part of the development project. We are ready to adapt and adopt better farming practices, but nobody listens to us" (Mondal, 2021). These farmers not only cultivate the land but also live on the land. They stay in temporary houses made of lightweight material like straw, tarpaulin and bamboo. They cultivate small tracts of land around two to three bighas (approximately 7500 square meters). A few farmers cultivate ten to twenty bighas of land. Agriculture is done on a small scale with the use of tools and those with larger farms may use tractors for cultivation. For irrigation, waste water contaminated with sewage as in the case of MKT farmers and in some cases bore wells and hand pumps are used. The small size of their landholdings does not entitle them to any state sponsored benefits unlike the larger farmers of North India in Punjab and Haryana. There are no subsidies for purchase of agricultural machinery like tractors, nor do they have any access to schemes related to crop insurance, dairy farming, horticulture etc.

These farmers, living on and cultivating the *khadar*, are a riparian community. They understand the ebb and flow of the river - how the water moves, how the land changes and how the floodplains change. Their farms are on the floodplains and these are living

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<sup>&</sup>lt;sup>9</sup> Interestingly, Jagatpur itself offers an insight into a traditional community-based resource management arrangement. The 'khadar' in Jagatpur is under co-parcernary ownership of the cultivating community. The size of the 'khadar' varies with the volume of water in the river. Each family's share of the total available land is pre-determined by tradition and is allocated through a system called 'batej'. This allows for equity and risk-pooling within the community. For more details, see Bhatia and Kumar (2016).

floodplains. When the river floods, they move to higher land and once the water recedes they move back. The impermanence of the floodplains is also a part of their lives. They do not own the land but claim rights of cultivation and residency dating back to 1857.

They face the threat of eviction because as per the official legalese they do not own the land. The state has appropriated the ownership of the floodplains. The farmers claim over the floodplains is one of 'use' and not proprietorship. They believe that the floodplains cannot be owned by anyone but one can have user rights over the commons. For them their survival depends on the floodplains and for the floodplains to survive the rights of these riverine and riparian communities need recognition. In the next section we discuss the history of the ways in which the farmers came to occupy the land and the eventual change in their status from legal occupants to encroachers.

## 6. The Peri-Urban Farmers of Delhi: From Legal to Illegal

The area that is under contention is the twenty-two kilometres of the floodplains or *khadar* from Wazirabad to Okhla. The *khadar* downstream from the old iron bridge <sup>10</sup> has four revenue estates Bela, Indrapat, Chiragah (North) and Chiragah (South). These estates or *nazul*<sup>11</sup> were formed after the Mutiny of 1857<sup>12</sup> when the British seized land from the Mughals and placed them under a commissioner. The jurisdiction of these estates over the next hundred years passed from the Commissioner to the Delhi Municipal Committee (DMC) in 1874 to the Nazul office in 1924 and later to the Land and Development Office (L&DO) to the Delhi Improvement Trust (DIT) which was formed in 1937 and after Independence to Delhi Development Authority (DDA) formed in 1957. In 1949, the DIT leased these estates, comprising 14.29 square kilometer land (8902 bighas), to the Delhi Peasants Cooperative Multipurpose Society (DPCMS). The estates were to be organised for food and dairy production. At the time of Independence in 1947, in order to ensure

<sup>&</sup>lt;sup>10</sup> The Loha pul or the Old Iron Bridge was opened to the public in 1866. It is a double decker bridge used for railways and road transport as well. It runs from east to west across the Yamuna. (PTI, 2023)

<sup>&</sup>lt;sup>11</sup> Nazul or abadi refers to land under the jurisdiction of the municipality or panchayat or the crown in this case.

<sup>&</sup>lt;sup>12</sup> The First Indian Mutiny in 1857 was a rebellion by the Indian soldiers against the East India Company. It started in Meerut and spread to Delhi, Agra and Lucknow and is often referred to as the First War of Independence (*Indian Mutiny | History, Causes, Effects, Summary, & Facts*, 2023).

food security for the refugees, the DPCMS allotted land to locals and migrants, following the bye laws of cooperative societies for cultivation of wheat, vegetables and cash crops.

The short-term lease of *nazul* or state land to DPCMS as per practice was for five years. The DDA which was formed in 1956-57 when DIT was dissolved continued the practice. For undisclosed reasons in 1967 the lease was not renewed. DDA started eviction proceedings against the DPMC lessees under the Public Premises Act of 1971, in 1991. The lessees produced revenue records, the records of rights, rent receipts, khasra girdiwaris<sup>13</sup> and various other documents as proof of legitimate occupation and residency extending till 2010. These include documents like ration cards, voter identification cards. The provision of amenities like portable washrooms, shelters and water storage tanks further reassured the farmers that their status was legitimate and their occupancy of the land was officially recognised. In 2011 DDA bulldozed over these lands in Bela estate destroying crops, homes and properties that had been occupied for generations. The farmers filed litigation against DDA but to no avail (Pradhan, A. & Chetan, 2018, 2020). The state has turned away from these riparian communities. They have been labelled squatters and criminals feeding Delhi citizens with toxic vegetables. The tenants are more vulnerable even though they have been on the land for several decades. There is no involvement of the stakeholders in the planning for the Yamuna. They are viewed as encroachers but need to be viewed from a post human perspective as stakeholders. The Yamuna Monitoring Committee has set up a website inviting suggestions for the Yamuna. The website (Suggestions to the Monitoring Committee – Rejuvenation of The River Yamuna, 2020) invites suggestions from NGOs, academicians, experts and individuals familiar with the Yamuna to help reduce the pollution of the river. The community that has lived with the river for more than a century and a half has not found a voice in the Yamuna.

#### 7. Conclusion

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<sup>&</sup>lt;sup>13</sup> Legal records of land and crops which are used along with a *shajra*, which is a map showing the land described by the *khasra girdawari*. The *khasra* generally names the ryat (peasant) working on the field. It is a field map with details of crops grown, area under each crop, irrigation and soil etc. (For more see Baden-Powell, 1892).

The peri urban farming families that we have studied have been living and cultivating the land on the banks of Yamuna since before Independence. However, their rights to the land that they have been cultivating for nearly seventy-five years are not formally recognized. As elaborated above, they have been involved in litigation with the state, demanding recognition of their rights to the land which is their source of livelihood and under threat from the 'development' and modernisation of the city (PCR India, 2022). The current developmental paradigm renders them voiceless, defenceless and on the margins. A primary survey of these communities would provide invaluable data to highlight these processes, but is beyond the scope of the present study.

The state's development plans, whether the MPD 2041 or its predecessor the MPD 2021, have failed to recognise the rights of communities living on the banks of the river for decades. The development of a world class city cannot be at the cost of its inhabitants. It is important to recognise their rights- their right to live, to cultivate and to live a life of dignity. Delhi's ecology is unique and should be preserved for there are few cities in the world where the urban and the rural are so interspersed. The city needs to cherish and nurture its riparian communities as much as its river. These communities have a unique synergy with the river – their lives accommodating its swell and ebb. Displacing these communities for an artificially constructed and built up river(front) is ecologically myopic and socially unfair. The understanding of the environment in Delhi needs to be inclusive of the interests of these farmers and the farming community at large. Bourgeoisie and Western development models will not cure what ails the river and by extrapolation the city of Delhi. All voices irrespective of the power they wield in the urban hierarchy need to be heard.

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