# THE POLITICAL ECOLOGY OF THE REJUVENATED YAMUNA INITIATIVE, DELHI

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The candidate confirms that the work submitted is her own and that appropriate credit has been given where reference has been made to the work of others.

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## Abstract

This thesis challenges the technocratic framing of the rejuvenated Yamuna initiative in Delhi's Chilla Khadar area by adopting a political ecology framework. Through this lens, the tensions, and intricacies among various environmental perspectives within the waterscape come to light. Employing a situated ethnographic study, the focus on the conflicting environmentalisms of small-scale farmers and politico-legal institutions unveils the interplay of power dynamics, trade-offs, interests, and values. By politicising the discourse, this study questions the strategy of displacing small-scale farmers to establish biodiversity parks as part of the Yamuna River rejuvenation.

This thesis provides deep critical insights into how various environmentalisms relate and compete by addressing three main research questions: What power dynamics are at play in the Yamuna floodplains? What is the nature of the environmentalism of the farmers and how does this relate to the environmentalism practised in the rejuvenated Yamuna initiative? How do the dispossessed negotiate, navigate, and compete under the rejuvenated Yamuna initiative?

To answer these research questions, I use ethnography to analyse the socio-ecological complexity within transforming Yamuna waterscapes in Delhi, from historical farming, to brief concretisation, to now the creation of bio-diversity parks. Contributing to the theories of bourgeois environmentalism and the environmentalism of the dispossessed, this thesis demonstrates the multiplicity of environmentalisms that exist in this space, decentring the unjust solutions imposed by the state and the judiciary that are dominantly framed to be singular.

Through the political ecology framework, the original contributions emphasise that while the current rejuvenation plans attempt to move beyond the prioritization of 'Western scientific' knowledge, they still perpetuate existing power imbalances, neglecting voices intimately connected to the river's life and livelihood. The application of solutions in an apolitical and technical manner, rooted in unjust neoliberal systems, exacerbates socio-ecological degradation. Farmer resistance in official and unofficial spheres, however, opens new and more equitable avenues for comprehensively addressing the broader degradation of the river basin.

# Acknowledgement

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# Acronyms

AAP- *Aam Admi* Party (Common Man's Party)

AOL- Art of Living foundation

BOD- Biological Oxygen Demand

BJP- *Bharatiya Janta* Party (Indian People's Party)

CPCB - Central Delhi Control Board

D/o- Dissolved oxygen

DDA- Delhi Development Authority

DJB- Delhi Jab Board

DMPD-41- (Draft) Master Plan of Delhi-2041

DMRC - Delhi Metro Rail Corporation

DND- Delhi Noida Direct way

DPCC- Delhi Pollution Control Board

DSIDC- Delhi State Industrial and Infrastructure Development Corporation

ENGO- Environmental Non-Governmental Organisation

EPI- Environmental Performance Index

GCRF- Global Challenges Research Fund

HLRN- Housing and Land Rights Network

IIT- Indian Institute of Technology

INTACH- Indian National Trust for Art and Cultural Heritage

IWRM- Integrated water resource management

JCB- Joseph Cyril Bamford Excavators

LCF- Land-claiming farmer

MCD- Municipal Corporation of Delhi

MLA- Member of Legislative Assembly

MP- Member of parliament

MPD- Master Plan of Delhi

MoEFCC- Ministry of Environment Forest and Climate Change

NCT- National Capital Territory

NGT- National Green Tribunal

NIUA- National Institute of Urban Affairs

OBC- Other Backward Class

PIL- Public Interest Litigations

PPP- Public-private partnership

RRTS- Regional Rapid Transit System

SANDRP- South Asia Network on Dams, Rivers and People

SPA- School for Planning and Architecture

STP- Sewage Treatment Plant

TF- Tenant farmer

UP- Uttar Pradesh state

UPSC- Union Public Service Commission

USP- Unique Selling Point

YAP- Yamuna Action Plan

YMC- Yamuna Monitoring Committee

YUVA- Youth for Unity and Voluntary Action

# Chapter 1 Introduction

## 1.1 Navigating Murky Waters: Unpacking the Dichotomy of Conservationist Environmentalism and Environmentalism of the Dispossessed in Urban River Rejuvenation

One hot Delhi day in 2014 a friend suggested we drive to the Yamuna River as it would be cooler in the open and windy area. While I knew that Delhi had a river called Yamuna, this was the first time it transformed into a reality as opposed to an abstract concept. As I drove by the bridge on the river Yamuna, it looked calm, serene, and inviting. However, getting closer, the unmistakable smell of decay greeted me. The banks were full of rubbish and the river was stinky and still.

Not just Delhi but the majority of the world's cities suffer from the problem of pollution (Kabisch et al., 2017). Urban environments are becoming increasingly dense. Estimates state that by 2050, 70% of people will be living in urban areas (de Oliveira 2019, p.81). Therefore, the demand now is to expand them in a green, sustainable, and resilient way (Enzi et al. 2017, p.161). However, despite decades of conservation and restoration projects with a social focus globally, both ecological degradation and societal inequality continue to increase.

One of the longest-running debates in environmentalism has been between the rights of local residents and conservation initiatives (Oldekop et al. 2015, p.134). These are captured in this thesis by making use of literature on conservation and environmental justice. To understand the river rejuvenation intervention, in this section I first look at the environmental conservation literature. I then turn to the environmentalism of the dispossessed theory, part of the environmental justice movement to analyse how the dispossessed act due to these interventions (Anguelovski and Martinez-Alier 2014, p.241).

Environmental conservation policies take a fences and fines approach (Oldekop et al. 2015, p. 134). The environment becomes a compartmentalised technical space populated by 'experts'. Modern scientific management according to 'ecological indicators' is deemed superior (Büscher 2012). The general arguments of this mandate start with how *all* humans have disconnected from nature. This is followed by touristic beautification schemes without paying heed to some of the deep-rooted issues causing ecological degradation such as a

consumerist lifestyle (Nixon 2013; Mawdsley 2004). By not recognising the interwoven nature of politics and science fails to place the intervention within the political-economic context in which it was implemented. These arguments fit in neatly with green economists wishing to solve the ecological crisis through capitalist market policies. Büscher (2012) calls to recognise these conservationist policies explicitly as 'neoliberal conservation' as actors and ecosystems are brought into the capitalist mode of production.

Within the process, places are classified as 'wilderness' rendering them without any history (Hua et al. 2022). The existing socio-ecological relations, values, traditions, and histories are not taken seriously. This often results in homogenising communities and labelling them as responsible for the degradation of the ecosystem (Büscher 2012). Within conservation policies, mixed-use waterscapes are seen as unappealing (Nixon 2013). As a result, environmental conservationist NGOs are accused of only caring for pristine landscapes and not for marginalised people (Anguelovski and Martínez Alier 2014). Thus, there is a need to critically interpret and analyse scientific evidence and claims, especially the social, political, and economic argumentation and assumptions (Büscher 2012).

This regressive, one-sided, coercive production supposedly eliminates politics by being 'neutral' (Negi 2011). It has no space for contradictions, conflicts, and power struggles. However, conservation policies mostly demand resource control. This is closely entwined with property rights, political boundaries, access to nature, control of territory, nation-building, national and cultural identity, and delineation of the public and private domain (Conca 2005). As no space is created for multiplicity, for conservation policies to work, the weakening and destruction of local land and river management institutions become paramount. These 'antihuman' strategies create 'sealed spaces' where existing residents have no room (Hua et al. 2022; Nixon 2013). These reshape global and local economies, waterscapes, cultures, and livelihoods (Oldekop et al. 2015, p.134). These factors are impacted by unequal power relations along intersectional lines of class, ethnicity, caste, occupation, and gender (Hua et al. 2022; Oldekop et al. 2015).

Bryant and Lawrence (2005) argue that conservation without including the livelihood and tenure security of local communities is meaningless. Moreover, it ultimately results in ineffective long-term ecological outcomes. In other words, conservation targets are met more often when the policies empower people, provide cultural benefits, and decrease

livelihood costs (Oldekop et al. 2015). Specifically, community agriculture and conservation initiatives have been found to revitalise distressed areas (Krings and Schusler 2020, p323). Overall, socio-ecological coevolution is often compatible. Moreover, co-management through Increased institutional strength and tenure rights of conservation zones typically delivers greater benefits (Oldekop et al. 2015). However, in most conservation policies, these aspects are too formulaic, prioritised lowly, partial, and unsatisfactory (Mawdsley 2004). This produces contradictory results where human-nature relationships become more tense (Hua et al. 2022).

To understand this connection between the environment and the livelihood of residents more critically I turn to environmentalism of the dispossessed theory. Environmentalism of the dispossessed covers instances where historically marginalised residents have a material interest in the environment as a source of livelihood (Anguelovski and Martínez-Alier 2014). Here care for the environment is considered as part of care for the community (Linkenbach 2009, p.12). Side by side various discourses and values such as livelihood, human rights, sacredness, and territorial rights are underpinned. This allows the expression of values that would otherwise remain hidden (Anguelovski and Martínez-Alier 2014).

Environmentalism of the dispossessed is generally associated with the rural South with India referred to as its cradle (Martinez-Alier 2014; Linkenbach 2009). It sits along with environmental justice and is generally associated with the minorities in the North (Anguelovski and Martínez-Alier 2014, p.173). One of the most significant focuses of the environmentalism of the dispossessed is on the right to place and territory against displacement. However, a rural bias is present in most of the literature (Anguelovski & Martínez-Alier 2014, p.168). This thesis shifts the focus to the displacement of urban farming.

What is important is that through a socio-ecological justice focus, the relationality and contextuality of multiple dimensions are recognised. It is understood that nature and society are mutually constructed. Therefore, socio-ecological justice calls for a transdisciplinary co-creation of knowledge by involving multiple actors. This co-creation needs to start with an understanding of the various manifestations of injustice and violence. It involves posing critical questions to policies that claim to be ‘rational’, ‘efficient’, ‘democratic’, ‘equitable’ and ‘just’. While being aware of the conflicts between multiple aspects of knowledge,

imaginary and values, a socio-ecological justice focus through the environmentalism of the dispossessed theory is able to unpack deeper dimensions that recognise opportunities and potential for greater success.

While conservationist environmentalism and the environmentalism of the dispossessed seem to vary considerably, Anguelovski & Martínez-Alier (2014) note that while difficult, there are instances of alliances built between them on the ground. Similar to institutional frameworks, the local communities also act within the political-economic realities with deep-rooted power imbalances. Moreover, while environmental sensibilities and practices exist, they are directly entangled with struggles for survival (Nixon 2013, p.252). As they act within the same mechanisms, they might equally strengthen, rather than alleviate, the dynamics that cause the problems (Büscher 2012, p. 40). These complex workings of power are dealt with through political ecology by analysing the negotiation of goals, aspirations, and interests (Hua et al. 2022).

Dealing with these complex debates, my PhD project contributes to the wider work of the GCRF Water Security and Sustainable Development Hub[1]. This is a £20 million 5-year project with partners from the UK, India, Colombia, Ethiopia, and Malaysia. Partners in Delhi are the School for Planning and Architecture (SPA) and the Indian Institute of Technology (IIT).

One of the core focus areas of the Hub is how politics and power play pivotal roles in shaping water governance, resulting in an uneven distribution of burdens and benefits (Duarte-Abadía et al. 2015). The global Water Hub addresses these challenges by critically examining strategies for achieving sustainable development. This involves conducting empirical, evidence-based case studies to comprehend the underlying context and the exercise of power (Nagheeby et al. 2023).

Analysing these case studies against a backdrop of contestations and contradictions underscores the dominance of the political dimension and the impact of power relationships among various actors in shaping water governance. Consequently, delving deeper into the subject requires moving beyond neoliberal institutionalism, which tends to favour processes like grabbing, privatization, and capital accumulation, thereby endorsing a

[1] https://www.watersecurityhub.org/

hegemonic vision of water (Blanco-Moreno and Peña-Varo 2023). Notably, this perspective often overlooks the role of power in water governance (Nagheeby et al. 2023).

This thesis contributes to the Water Hub's body of work such as the importance of discourses, narratives and debates in policy design, decision-making, planning and water governance (Bantider et al. 2023), the conceptualisation of justice to include aspects such as knowledge, principles and values and embracing natural entities through indigenous worldviews (Blanco-Moreno and Pen˜a-Varo´ 2023), the complexity of hidden actors and workings of power relations (Figueroa-Benitez et al. 2023), conceptually considering the need of a collaborative governance strategy where water is understood as being an integral part of society, culture and nature (Sánchez Torres et al. 2022), socio-political dimensions causing infrastructural violence (Kumar et al. 2021), and fragmentation of water governance hindering coherent and efficient action (Nagheeby et al. 2023).

The Yamuna floodplains in Delhi become a vital case study to analyse the debates between environmental conservation being practised through the rejuvenated Yamuna Initiative and the multiplicity of worldviews of small-scale farmers being displaced through the theory of environmentalism of the dispossessed. Conducting this research while being part of the Hub gives me access to deep financial and institutional resources. Along with the vast network of senior academics, it provided a group of early career researchers doing exciting research in the five countries. These connections were useful in shaping the thesis from the beginning. During the literature review, they weighed in on shaping ideas, during the fieldwork they gave me an avenue to reach out to a range of actors from state officials to judiciary experts, and during the writing stage by giving feedback and becoming co-authors and writing buddies.

## 1.2 River pollution and urbanisation

In India, this increase in environmental degradation and social inequality can be seen extensively. A popular saying in the Hindi language, *घाट घाट का पानी पीना* (drinking from multiple cultural water bodies) means learning from various experiences. However, currently, the literal translation would lead to numerous health problems (Bhattacharya et al. 2014). Out of 180 countries in the Environmental Performance Index (EPI), India stood last in 2022 even though it has been taking steps for environmental protection since 1972

after the United Nations Stockholm Conference. A reason for this ranking is that 70% of India's rivers, mostly in the urban stretches, are polluted (Pandey 2020). Rivers and floodplains are used for development, livelihood, leisure, and cultural purposes. As a result, their toxic nature becomes a pressing matter.

For much of human history, the urban has been equated with civilisation/order and nature with threats/chaos. What was let in was carefully manicured for the aesthetic pleasures of the upper-middle-class (Lennon and Scott 2014). Similarly, Capdevila (2019, p.39) states that during early modernity urbanisation was equated with progress, and agriculture, and the countryside were equated with backwardness. This has been elaborated on in Chapter 4. In short, generally, the city is seen as the antithesis of nature and urbanisation is considered the trading of the natural environment for a built environment (Loftus 2012, p.3). These discourses form socio-ecological solutions.

However, in Delhi, we are now seeing the opposite in the form of rejuvenating the river and the floodplains. This includes but is not limited to, the creation of 10 bio-diversity parks and artificial wetlands on the floodplains (Figure 1). These are a prototype, to be copied in the rest of the 351 urban stretches of polluted rivers in the country (National Green Tribunal (NGT) 2019). As a result, currently, the waterscapes of Delhi floodplains are dramatically transforming. This programme's current call is for a sanitised urban nature. This follows the environmental conservation concepts of what Lefebvre (1991) calls 'first nature' and Smith (2008) calls 'pristine nature'.

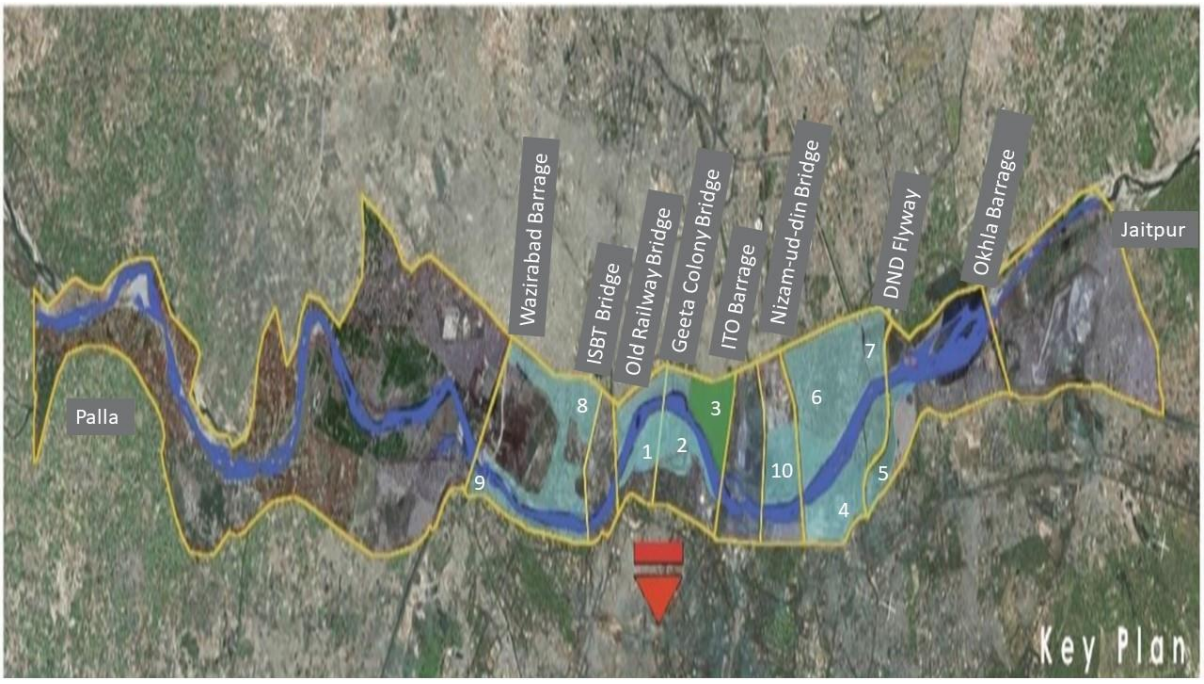


Figure 1. Plans for the creation of 10 biodiversity parks, Adapted from Delhi Development Authority (2019) (DDA) and DDA (2020).

This transformation however involves 'reclaiming' the land from thousands of small-scale farmers in the area through evictions. This completely erases the rich socio-ecological history of the area giving an impression of emptiness making it a non-space. This rebranding and erasure show that not only is urban planning not incorporating farmers, but it is also erasing any traces of their existence in the area. As stated, any rural/traditional trace of the floodplains is being remodelled to fit into the urban/modern city imaginary.

The contradiction of the situation can be understood by the fact that small-scale farms can contribute to enhancing livelihood along with the conservation of biodiversity (Gomiero et al. 2008; Altieri 2002). Overall, biodiversity can benefit small-scale farmers strongly and vice versa (Chappell et al. 2013, p.5). Not considering these aspects brings out questions of who the environment is being produced for? Who are considered citizens with rights? Why is this approach to natural protection being followed?

This became a focus of my study when one, the *Namage Gange*[2] (2021) report came out advocating for the restoration and rejuvenation of the river and its floodplains taking a turn

[2] *Namami Gange* ('Obeisance to Ganga' in Sanskrit), National mission to clean Ganga and its tributaries (Including the Yamuna).

from focusing on technical grey infrastructure under the Yamuna Action Plan. Two, the (Draft) Master Plan of Delhi-2041 (DMPD-41) (DDA 2021) came out allowing urban farming while rapidly conducting eviction drives on the floodplains (Economic Times 2023; Gupta 2023). These developments and contradictions of on-ground realities drove me to focus on the floodplains and contested and competing environmentalisms in Delhi. The disparities in the Yamuna floodplains point to how purposeful vulnerabilities are created and widened. As a result, it is important to explore who gains and who loses from the restoration and rejuvenation plans.

Thus, critical questions are left to be answered regarding trade-offs, power dynamics, priorities, and choices in the implementation of the rejuvenated Yamuna initiative[3]. This is done by viewing them as socio-ecological as opposed to technical solutions to apolitical problems. There needs to be evaluation, debate, and management of power dynamics within these decisions (Healey 1997, p.44). Therefore, a deeper and more nuanced understanding of the interactions is required to implement environmental solutions more effectively (Lafortezza and Chen 2016, p.578). Thus, it is imperative to examine how planning, design and management of urban ecologies intersect with questions of power and politics (Cousins 2021, p.6). As a result, to study the rejuvenated Yamuna initiative, its socio-political costs are analysed.

The thesis responds to these questions of environmental governance by using the political ecology framework to analyse the hidden social marginalisation embedded within this rejuvenated Yamuna initiative. I establish that the current waterscape transformations are infused with social and political factors that the technical apolitical ecological discourses deliberately erase. Throughout the thesis, this deliberate institutional erasure will be marked along with analysing how the displaced and dispossessed resist and attempt to place themselves in a position of negotiation surrounded by violence and desire.

[3] I use the umbrella term 'rejuvenated Yamuna initiative'. The important thing here is that there has been a partial shift of discourse from 'clean' to 'rejuvenate' within official documents (elaborated on in Chapter 4) to emphasis on the health of the entire ecosystem including the floodplains, the groundwater, the wells and so on. Therefore, in translated quotes in the empirical chapters, while the Hindi word 'साफ' is closer to the English word 'clean', I have instead used the word 'rejuvenate'.

This chapter focuses the discussion on the waterscape transformations in Delhi due to the polluted river Yamuna. The research is placed within the previous body of research analysing environmentalisms in Delhi. This is followed by stating how this is extended in this thesis by explicitly stating the research questions and the contribution of the thesis.

### 1.2.1 Yamuna in Delhi

Once, the Yamuna had a central place in the city. The city was built around it. Now the Yamuna is hidden for most *Dilliwale* (residents of Delhi) socio-spatially. As discussed above, it is heavily polluted. Reflecting this, the upper-middle-class *Dilliwale* in interviews conducted described the river as “the former gem of Delhi”, “smelly”, “harsh (water)”, and “filled with garbage”.

The Yamuna originates from the Yamunotri glacier in the Mussoorie range of the Himalayas. It travels for 1,370 km covering the states of Uttaranchal, Himachal Pradesh, Haryana, Rajasthan, Madhya Pradesh, and Delhi. In the end, it merges into the river Ganga in the state of Uttar Pradesh (Sharma and Kansal 2011). The magnitude of the river can be seen by the fact that it travels through 10.7% of the Indian landmass. Out of this vast expansion of the river, a mere 50 km passes through Delhi, entering through Palla and leaving through Okhla. Even within this 50 km stretch, only 22 km (2%) accounts for 70% of the pollution in the entire river (Yamuna Monitoring Committee 2020) (YMC) (Figure 2). Due to all the water being diverted and trapped by the time the river reaches North Delhi, the monsoon river does not get a freshwater flow for almost 9 months (Jain 2009, p.28). As a result, in the non-monsoon seasons (September- June) between this 22 km stretch in the heart of Delhi, there is a flow only of sewage from 23 drains containing domestic and industrial waste (YMC 2020, p.26). In this stretch, the river is full of heavy metals such as chromium, nickel, copper, zinc, lead, cadmium, and arsenic (Bhattacharya et al. 2014). Here, the river has 0 dissolved oxygen (D/o) at multiple points making it lose its life-bearing capacity (YMC 2020). Many times, a foam-like white substance can be seen on the surface of the river (Shekhar and Sarkar 2013, p.43). Numerous diseases such as delay in mental and physical development in children, blood pressure, fertility, miscarriage, memory loss, vision loss, tumour, cancer, seizure, brain damage, and many more are direct causes of these heavy metals

(Bhattacharya et al. 2014). These factors make the river the prime water source for the Capital city and the most polluted stretch in India (Shekhar and Sarkar 2013, p.43).

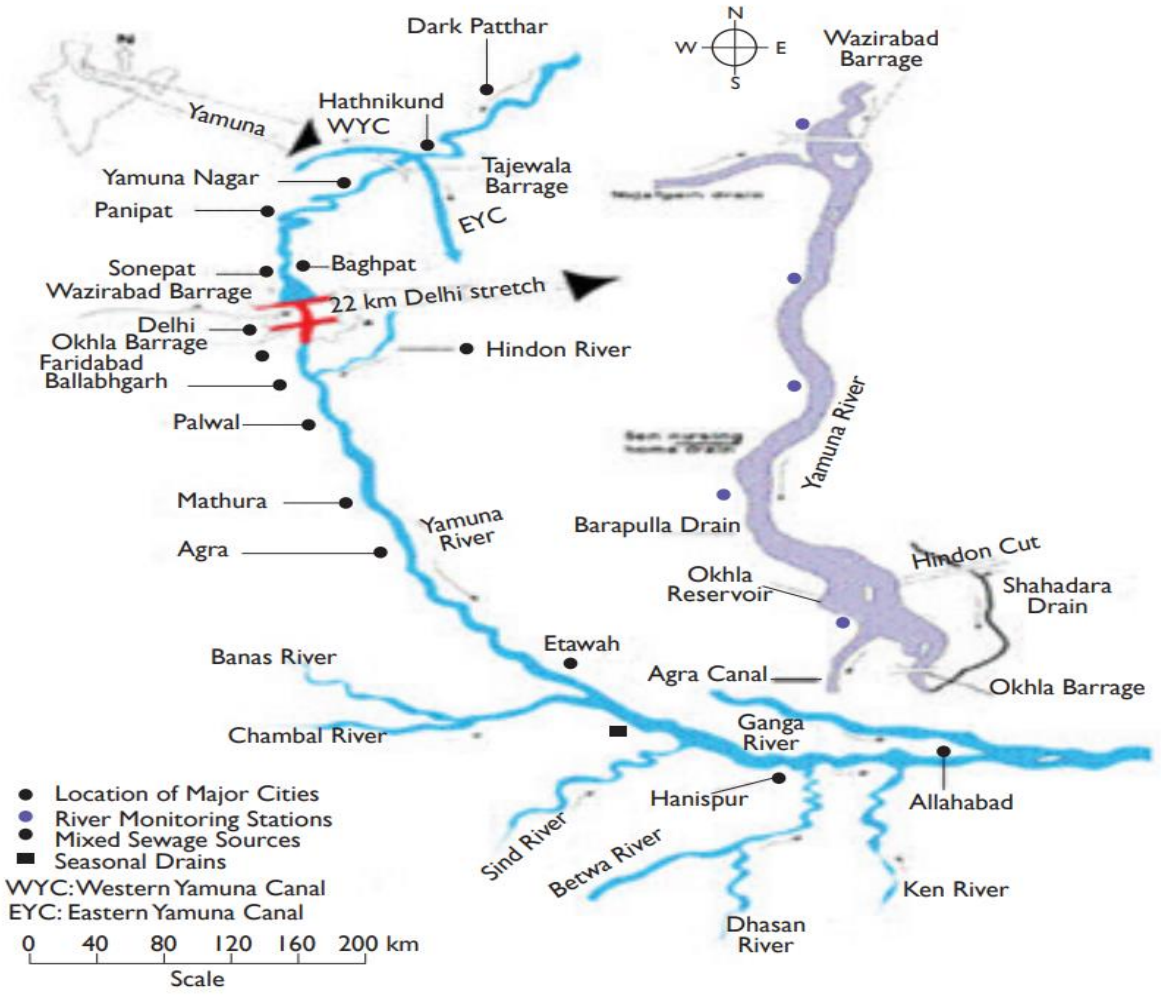


Figure 2. Traverse of River Yamuna, (Nallathiga 2018, p.33).

The Yamuna River, like most rivers, cannot be examined in isolation. The river is not just its waters but also includes the edge, the buffer zone, groundwater, floodplains, ponds, wells, watershed and finally the entire basin (*Namami Gange* 2021, p.26). Not only this but the green spaces of the city are also connected to the floodplains. This was captured by Rajiv Ranjan Misra, former director-general of *Namami Gange* (National mission to clean

Ganga),[4] by calling the water system 'one water' at the 'Wednesdays for Water' seminar (June 2022). Figure 3 visually depicts the difference between environmentally degrading scattered water bodies and green spaces on the left panel as opposed to environmentally sustainable 'one water' where all green spaces and water bodies of the city are connected. Here the binaries between land/water, urban/rural, and nature/society are broken.

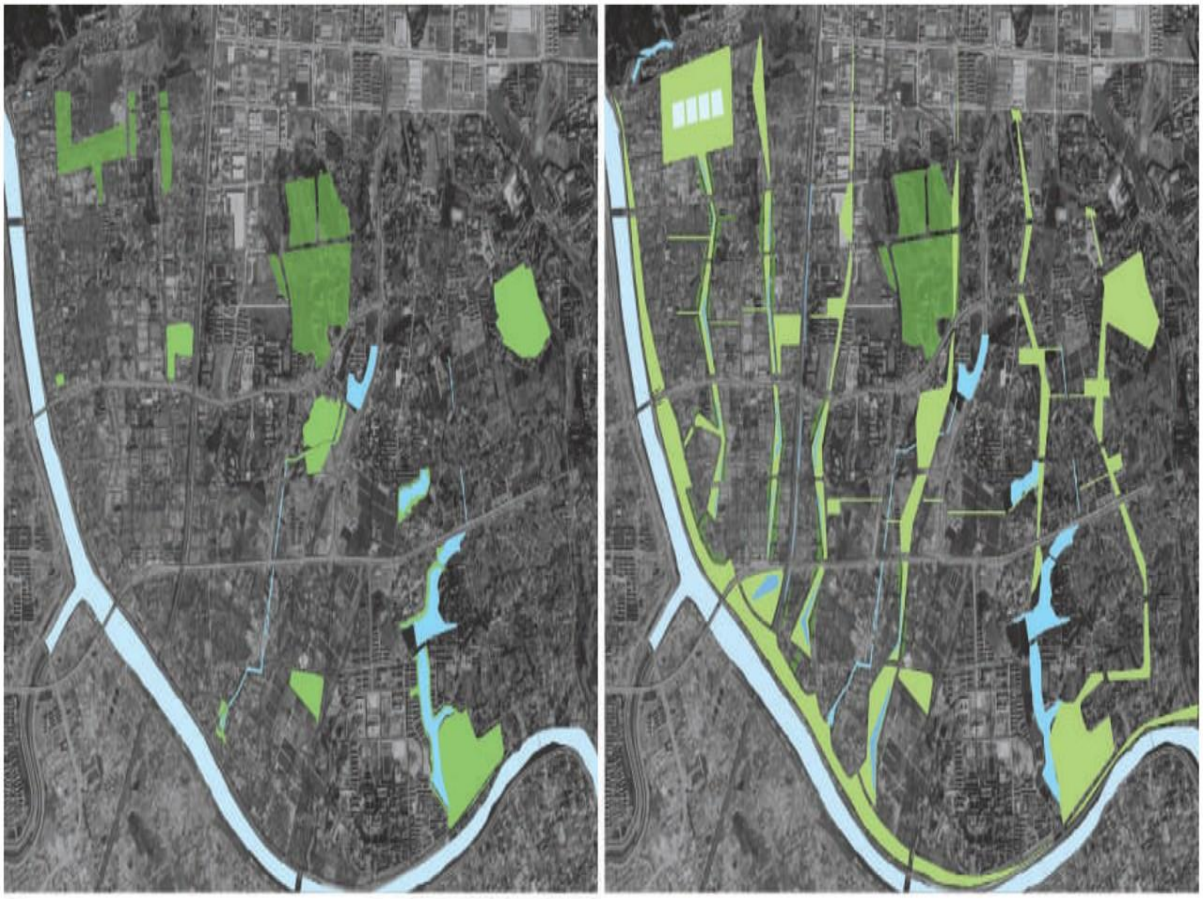


Figure 3. Restored and rejuvenated waterscape, Adapted from *Namami Gange* (2021, p.39).

[4] *Namami Gange* was announced in 2014 as a priority by Prime Minister Narendra Modi for galvanising votes (Alley 2019, p.11). It aims to coordinate multiple state agencies to facilitate basin wide IWRM (Integrated water resource management) (Wang et al. 2016, p.133). The mission includes multiple riverfront development projects (Sharma & Kaur 2020).

Earlier, complicated underground channels connected the groundwater, the floodplains and the river through the city wells, ponds, lakes, and बाबडी (step wells). However, due to the narrowing area of the floodplains, permanent constructions on the riverbank such as roads, flyovers, bridges, temples, and residential complexes, and concretisation of the city, these rejuvenation and revival capacities have been diminished leading to the heavy pollution. This novel understanding within state and judicial institutions has led to the call for the preservation, conservation, and rejuvenation of water bodies in the entire city (*Namami Gange* and National Institute of Urban Affairs (NIUA) (2020, p.63). However, to implement this understanding, small-scale farms are being evicted.

### 1.2.2 Farming on the floodplains

While driving to the river, one has to cross several small-scale farms (Image 1). For a moment you forget about the traffic, the noise, and the vast crowds of the metropolitan city as you traverse the green open fields. These stretches were unknown to me before the research as would likely be the case with most of the upper-middle-class *Dilliwale* interviewed.

Image 1. Small scale farms on the Yamuna floodplains, by Shivani Singhal, July 2021.

Globally, the population in urban areas is increasing dramatically, with more people now residing in urban areas than in rural areas. Urban agriculture is now being considered to contribute to the city's subsistence, especially during crises such as those witnessed during the COVID lockdown. Additionally, rural migrants often turn to agriculture after migrating to urban areas when presented with an opportunity. Those migrants who do so are in a better position to meet their nutritional needs (Diehl et al. 2019). Capdevila (2019, p.42) terms this a 'homogeneous territorial continuum', where the urban and agricultural aspects are just nuances of a seamless landscape. Quintas-Soriano et al. (2016, p.543) recognise these anthropogenic landscapes as having 'multi-functional agriculture'. This has made farmers' rights a global agenda (Davey 2009, p.7).

The floodplains are natural elements, yet they are products of pre-colonial, colonial, and post-colonial interventions (Lahiri-Dutt and Samanta 2013, p.8). The गाद (silt) deposited on the floodplains by the river is fertile. Floodplain water recharge assists farmers with low-cost

irrigation (Babu et al. 2000). Additionally, due to the volatility of the floodplains, the rented-out land is relatively inexpensive. Thus, the entire Yamuna floodplain area contributes significantly to the country's agrarian economy. Farming on the floodplains of Delhi dates to the city's establishment (Singh et al. 2010, p.611). However, the land is not inherently agricultural-friendly, it is made so with labour[5]. The farmlands on the floodplains are not extensive and remain small-scale. Overall, the landscape is comprised of both farms and shrubs. Figure 4 below shows that fruits, vegetables, and flowers grown are then sold throughout Delhi.


Figure 4. Vegetables grown in the Yamuna floodplains in Delhi, (Social Collaborative, 2021).

[5] Interviews with various land-claiming farmers and judicial documentation state that out of the 13,344 *बीघा* land, only 1,017 was deemed cultivable in 1949. *बीघा* is a measure of land equalling 1/3 to 1 acre (Lal & Pradhan 2019, p.141).

### 1.2.3 The complexity of Delhi and Yamuna floodplains

Delhi is one of the fastest-growing megacities in the world boasting a population of around 20 million (DDA 2021). It holds the title of the largest city in the country in terms of area, covering approximately 1486.5 sq. km (DDA 2021, p.2). Historically, Delhi has expanded by either displacing or engulfing surrounding villages. Presently, it is highly urbanised with the (Draft) Master Plan of Delhi 2041 (DDA 2021, p.3) noting that "more than 97% of the population was urban in 2011 as compared to 53% in 1901." Despite urbanisation, Delhi remains one of the greenest cities in the country featuring a blend of natural and planned greens (DDA 2021, p.13). However, agricultural land continues to be converted for non-agricultural purposes. Currently, Delhi comprises 367 villages, most of which are classified as urban (DDA 2021, p.2). In 2001, It is estimated that a mere 0.8% of the workforce was engaged in the agricultural sector (DDA 2007).

This intersection of various factors such as a polluted river, urbanisation, and farming is evident on the Yamuna floodplains. The Yamuna *Khadar*[6] (floodplains) area is unique and can be characterised as alive and full of movement. Overall, it does not have fixed characteristics physically, demographically, legally, culturally, and spiritually. Physically, the river cycles especially in monsoon-fed rivers are dynamic. Lahiri-Dutt (2015, p.425) notes that the floodplains' natural state is inherently unstable. During the non-monsoon season, it is solid dry land, transforming into a liquid expanse during the monsoon season when the river takes over. Post-independence, as the city expanded, embarkments were raised along both the eastern and western banks of the river to contain it within what was marked as Zone O within the Master Plan Delhi. The land use was designated as both 'river and water body'. This zone naturally floods during the monsoon regularly and was declared as a 'no construction zone' (Babu et al. 2013).

Demographically, it is a space that serves various functions such as livelihood, residence, leisure, and ecological. The legality of both the land and the people on the land constantly changes. The area has a mixture of private land and land under various state agencies such as the Delhi Development Authority, the UP Flood and Irrigation Department, the Forest Department, the Public Works Department, the Delhi- Meerut RRTS (Regional Rapid Transit

[6] Also referred to as *Khadar* in popular discourse and in the thesis document.

System), Delhi Metro Rail Corporation and Delhi Horticulture Department (*Main Bhi Dilli* 2020, p.25). Multiple legal cases regarding land ownership are ongoing in the High Court of Delhi and the Allahabad Court in Uttar Pradesh. Even the Yamuna *Khadar* residents i.e., the farmers and daily wage workers must prove their legality and citizenship.

Spiritually, the Yamuna is a sacred river for Hindus, playing a vital role in various Hindu festivals and rituals. Ashes after cremation, idols along with ceremony offerings are immersed into the river. However, the meaning of its sacredness shifts from person to person. One discourse says that the purity of the goddess does not get touched by material pollution (Alley 2019, p.32). This separates the symbolic goddess from the physical river and hence removes the religious voices from the debate. The second discourse claims that the goddess purity cleanses the river of pollution, erasing the possibility of physical pollution (Wilhelm 2016, p.7). A third discourse acknowledges the polluted river but limits to advocating to keep the घाट (religious bathing areas) clean and encouraging people to conduct their rituals in their own buckets and containers (Sharan 2011, p.451). Instead of becoming an ideological force for mass environmental action, this discourse limits action to individual green behaviours and consumer choices.

Considering all these factors, the floodplains are not fixed physically, demographically, legally, culturally, and spiritually. This uncertainty makes them a site of uncertainty, mystery, and danger along with desire and hope. At times they become hyper-visible to authorities, leading to evictions and constructions. However, officially on maps, the place is mostly vacant, ready to be utilized. Thus, while the place is alive on the ground, officially, it is dead, and in need of revival. Currently, this 'wilderness' is being transformed into an illusionary fixed authorised city. All these factors make it hard to categorise the floodplains as urban, rural, peri-urban, land, water, agricultural area, or forest. They exist simultaneously and shift constantly. In other words, their meaning and use continuously change. As it is hard to pin down, it is almost devoid of meaning altogether. Therefore, while being a 'cultural landscape' (Sauer 1963), Baviskar (2020) recognises that for most of *Dilliwale,* it is a 'non-space'. These "previously neglected" floodplains are now to be eco-sensitively rejuvenated and transformed into public waterfronts (DDA 2021, p.39).

## 1.3 Intervention for rejuvenation

Many institutional steps have been taken for the rejuvenation of the river. This initiative began with the Yamuna Action Plan (YAP) in 1993 by the state and is currently being continued through restoration and rejuvenation plans led by both the state and the judiciary.

The core objective of the Yamuna Action Plan is to restore the river to bathing standards by constructing Sewage Treatment Plants (STPs). It compasses a total of 21 towns and 3 states (Nallathiga 2018, p.35). YAP exclusively focuses on point-source domestic sewage as 85% of pollutants in the Yamuna River in Delhi consist of domestic sewage. This technical plan aligned with the demands of the Japanese funding body and was formed under its heavy guidance[7]. However, it has not been able to create a dent in reducing the pollution. Despite being inherently formed as a one-time solution, it is currently in its 3rd phase, as part of the *Namami Gange* mission. Along with Japan, numerous other countries such as Australia, the United Kingdom, Germany, Finland, and Israel, have collaborated in the construction and operation of this mission (Sharma and Kaur 2020, p.173). These international collaborations play a vital role in shaping policies dominated by limited technocentric discourses. Chapter 4 elaborates on how multiple knowledges, voices, and imaginaries are streamlined violently.

In light of the plan's failure, the National Green Tribunal (NGT) (2015) stated that "*despite repeated policy attempts to save the river since the start of the YAP-I in 1993, little to no progress had been made*." Additionally, the Parliamentary Standing Committee on Environment and Forests (2012) declared that "*the mission to clean the Yamuna had failed*" (cited in Schiff 2018). Importantly the reason for this was identified as the neglect of social aspects in the plan. Suggestions included a decentralised feedback element and additional input from people living on the banks of the river. However, Phase 3 of the plan, implemented in 2016, continues to follow the same 'hardware approach' of upgrading infrastructure, such as STPs, sewer lines and घाट (religious bathing areas). Consequently,

[7] For the Plan, the Japan Bank for International Cooperation under a bilateral agreement provided aid of USD 217 million in 1st phase, 142 million USD in the 2nd phase (2003-2011) and, 127 million USD in the 3rd phase (Tarannum et al. 2018, p.1).

institutional environmental experts and various stakeholders including farmers and *Dilliwale* predict another failure.

Thus, the issue was looked at more comprehensively by the judiciary. Multiple Public Interest Litigations (PILs)[8] were pending in various courts concerning Yamuna River pollution, such as the Manoj Mishra v Union of India & Others (Application No. 6 of 2012). The Supreme Court transferred these cases to the National Green Tribunal (NGT), and it came to be known as 'the Yamuna matter' in popular discourse. This is how it will be referred to henceforth. Although initially filed to specifically halt the dumping of debris in the river by state agencies, the judiciary has taken various holistic steps to reduce pollution such as directing the state to establish STPs, laying out sewer systems, managing the river flow across various states, monitoring water quality regularly, and addressing industrial pollution, among other measures (YMC 2020). Restoration and rejuvenation of the floodplain are key components of these interventions (DDA 2020) supposedly also involving "citizens as actors" (*Namami Gange* and NIUA 2020, p.63).

However, overlooking the on-ground socio-political dynamics in the basin, these plans establish new governing mechanisms arbitrarily. While the interventions are to stop river pollution, they are practised following different approaches on the ground. Some types of pollution are personified. A stark difference is seen in how domestic sewage is tackled as opposed to non-point pollution through pesticide use in agriculture. Small-scale farmers are often held responsible for pollution and face evicted, many a time without prior notice. In contrast, domestic sewage is tackled through systematic institutional support. In total 17,659 households lacking sewer connections discharge sewage directly into the Yamuna without treatment through stormwater drains (YMC 2020). While they are not penalised or threatened with eviction, the state government is currently connecting them to the sewer network for free under the *Mukhya Mantri Free Sewer Yojna* (Chief Minister Free Sewer Scheme).

[8] PIL refers to litigation for the common good (Alley 2009, p.795). It was set up in 1981 to protect the fundamental rights of citizens. Initially, in a period known as the 'golden era' of PILs, the court focused on the marginalised sections of society (Gill 2016, p.40). It was extended to include environmental issues in the late 1980s (Baviskar 2012, p.173).

Importantly, the lines between this clear class divide of being subjected to violence have been blurring in the past year. As elaborated in Chapter 4, due to capacity shortages, most of the city can be said to operate through illegal/informal means to obtain services such as water, housing, and sanitation. Bhan (2016) notes that the bourgeois enjoy a legitimate position even when engaging in illegalities and it generally does not lead to eviction. It is crucial to emphasise that around half the city is unplanned, and eviction based solely on a structure's illegality would demolish half the city (Karpouzoglou and Zimmer 2016; Bhan 2016). While this legitimacy has been enjoyed in an absolute manner where the upper-middle-classes largely remain untouched by demolitions, recent events such as the demolition of the Supertech Twin Tower (upper-middle-class housing)[9] (PA 2022; Biswas 2022) and various farmhouses (upper-middle-class leisure spaces)[10] (Panday and Dev 2023) in 2022 marks a significant shift. Much like the *jhuggi*[(11)] eviction, these demolitions resulted from action under the rejuvenated Yamuna initiative. Thus, the point here is to examine the changing power dynamics and transforming environmentalism through the multi-layered rejuvenated Yamuna initiative.

## 1.4 Aim and Research Questions

This thesis explores the hegemony of various environmentalisms and their interconnectedness in the Yamuna basin in Delhi. Examining the various dominant and non-dominant environmentalisms and their interactions delves into the inclusiveness of the current rejuvenated Yamuna initiative.

The research is guided by the following main questions:

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[9] Twin towers, having 850 flats, made by Supertech Ltd, were demolished on 28th August 2022 for not complying with city plans hence being illegal.

[10] Farmhouses are large country estates with have little to do with agriculture. The size of these varies from small houses with a few trees to mansions with large gardens and swimming pools (Soni 2003, p.4747). The name 'farmhouse' is deliberate to own tax-free agricultural land. They are owned by the wealthy and powerful as a lucrative investment in property, money laundry and venue for celebrations (Davis 2006, p.116). Around 124 farmhouses were demolished and 1,000 more were declared as illegal due to being constructed on the Yamuna floodplains in various drives in 2022.

[11] Areas often built with temporary materials are referred to as shanty towns, slums, ghettos, squatter settlements etc (Al-Nammari 2013, p.254). In Delhi, they are called '*jhuggi jhupri*' (JJ cluster).

1. What power dynamics are at play in the Yamuna floodplains?
2. What is the nature of the environmentalism of the farmers and how does this relate to the environmentalism practised in the rejuvenated Yamuna initiative?
3. How do the dispossessed negotiate, navigate, and compete under the rejuvenated Yamuna initiative?

These questions have been approached with an explicit socio-ecological justice orientation which is viewed as a strength rather than a bias, offering enhanced objectivity compared to an assumption of neutrality in discovery (Jackson 2006). This is because one, privileging the view of farmers represents environmental perspectives fully as they have not only been subordinated but also erased from the current discourse. Two, they have superior access to the experience of displacement and dispossession. This dispossession is understood as grounded in social structures, changing over time, and even reproducing socio-ecological inequitable relations of various degrees. Three, their position has been problematised in the thesis by exploring the positionality of various actors, taking a cautionary approach without essentializing the farmers. These considerations inform the choice of qualitative methods to capture perspectives while being mindful of positionality (Gregory et al. 2009, p.458).

## 1.5 Environmental Research in Delhi

I address these research questions by reviewing the literature on environmental governance. For a long time, environmentalism in India was studied as centred within rural spaces, characterised as the environmentalism of the dispossessed (Martinez-Alier 2002; Guha and Martinez-Alier 1997) which valued human presence within nature rather than in opposition to it (Chapple 1997; Arnold and Guha 1995). However, currently, the dominant environmentalism in Delhi, endorsed by actors such as the state, the judiciary, environmentalists, and the upper-middle-class *Dilliwale* seems to be following the principles of urban conservation based on the ontological nature/culture dichotomy. Scholarship in the past decade has focused on the socio-ecological justice issues in urban spaces in India, particularly in Delhi. The emphasis has been on urban spatial changes driven by aesthetics and safety, leading to the demolition of *Jhuggi* clusters and small-scale factories in favour of large-scale development projects (Baviskar 2020, 2019, 2017, 2012, 2006; Truelove 2019,

2018, 2016; Follmann 2016, 2015, 2014; Sharan 2016, 2011; Rademacher 2015; Ghertner 2014, 2011, 2010; Dupont 2011; Mawdsley et al. 2009, 2004; Batra and Mehra 2008).

This scholarship has analysed these large-scale socio-spatial changes through a focus on the 'new middle class' dictating urban development (Baviskar 2020, 2019; Brosius 2015, 2010; Harriss 2007; Fernandes 2006, 2004; Joshi 2001). While these scholars have also referred to the group as elite, upper class, and affluent class, this social group is popularly known as the 'middle-class'. However, for the purposes of this analysis, in the thesis I describe them as the 'upper-middle class' (Baviskar 2020; Brosius 2010) who are considered 'modern' (Joshi 2001, p. 2). The upper-middle-class in India cannot be defined as a single category. It is divided into different fractions based on social hierarchies such as caste, region, religion, language, and ethnicity (Baviskar 2020; Fernandes 2006). Instead, Fernandes (2006) proposes the concept of 'middle classness' as a means of evaluating the experience and imaginary connected with the middle class. Class is complex, dynamic, and relational which is grounded in multiple fields of power (Baviskar 2019; Campling et al. 2016; Brosius 2010). The usual indicators of income and occupation fall short of understanding the social category of the middle class in India (Joshi 2001, p. 2). Brosius (2015) refers to them as 'consumers' and Joshi (2001) as 'cultural entrepreneurs'. Baviskar (2020), Harriss (2007) and Fernandes (2006) define the Indian upper-middle-class as English-speaking, educated, upper-caste, white-collared professionals (Figure 5). Here having money is not enough. Linguistic, aesthetic, and moral knowledge must go hand in hand for acceptance.

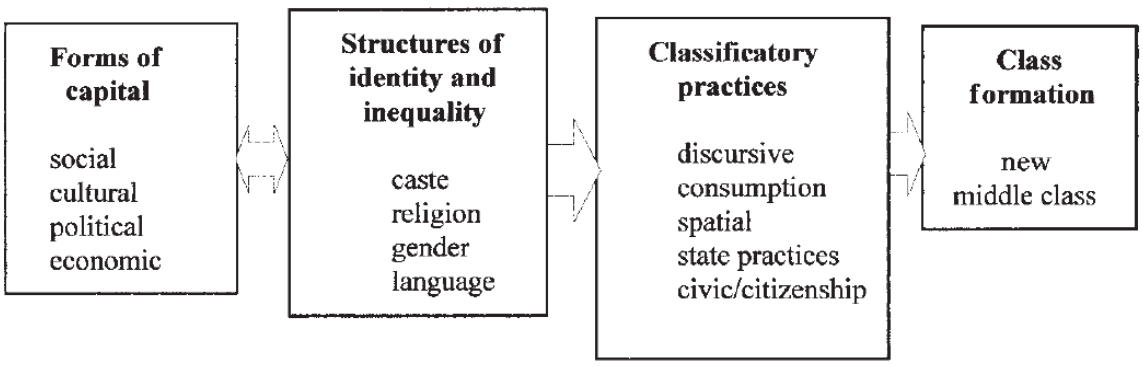


Figure 5. Synchronic mechanisms of new middle-class formation (Fernandes 2006, p.xxxii).

Moreover, relations within classes might be both collaborative and antagonistic (Campling et al. 2016, p.1751). Unlike the rural poor, who often have generational roots and ties, the urban poor are perceived as unlawful by the authorities. This urban-rural divide is also evident within the upper-middle classes, where only the urban English-speaking professional groups are considered as 'middle class' while their rural counterparts, possibly earning the same amount of money are not (Fernandes 2006). Therefore, economic indicators fall short of capturing the urban/rural class divide (Breman 1989, p.309).

The new 'modern' upper-middle-class, due to their new neoliberal lifestyles, aspire to shed the burdens of the colonial economic backwardness associated with the 'Third World' countries. They utilise both older resources of power and privilege, as well as new social and political relations to be 'modern'. Thus, while claiming to be modern, the upper-middle-class maintains historic discrimination patterns creating the illusion of an open and fluid middle class while internally maintaining the past hierarchy (Joshi 2001). Consequently, within the group, several economic and identity-based inequalities exist making class intersectional. Joshi (2001) argues that this modernity is fractured where more modern social organisation coexists with reinforcing older hierarchies.

The shift from the ideology of a state-managed economy to an upper-middle-class based culture of consumption is notable (Brosius 2010; Fernandes 2006, 2004). This consumption needs to be understood as expressions of asymmetric production of knowledge and power (Brosius 2010). Certain types of jobs are deemed more powerful than others in this context.

The use of the discourse of 'public interest' and 'citizenship' is limited to the upper-middle class (Fernandes 2006). Simultaneously economic, social, political, and cultural, this identity asserts itself in various cultural and social forms that command power and control the circulation of capital, such as claiming public space to develop new aesthetics (Campling et al. 2016; Fernandes 2004). However, its political role is often invisible (Fernandes 2006). The way classes relate to each other is embedded in how they relate to the state and the judiciary, directly impacting the ecology. The state and the judiciary actively exercise their power in this production of the upper-middle-class power dynamics of cultural citizenship. Moreover, these institutions throw up barriers to prevent any mobilisation of the 'non-modern' people, limiting their upward mobility. As a result, class-based inequalities persist (Breman 1989, p.322). Liberalisation has not led to the decline of the power of the state but

merely to a shift with new forms of collaboration emerging between the state and the private sector (Fernandes 2004).

## 1.6 Contribution of the study

Political ecology is a popular framework that has been used to study the environmentalisms of the Yamuna floodplains in Delhi to advance this conversation. The focus of the research mentioned above has been limited to environmentalists following 'bourgeoise environmentalism' as stated by Amita Baviskar (2020, 2019, 2012, 2011). The bourgeois upper-middle class has a massive influence on the environmental discourse through the majority of representation in the media, scientific establishments, NGOs, bureaucracy, and environmental institutions. Social, cultural, and political capital imbalances shape the power dynamics of who defines pollution, who has the capacity to act on it and what steps are taken to curb it.

I make use of Baviskar's (2020, p.125) description of identifying bourgeois environmentalists as,

"*padhe-likhe log* (educated folk), a group instantly recognised by its dress, deportment, and language. These are white-collar professionals and businessmen, usually educated in private English-medium schools, usually upper-caste. Besides being owners of cultural capital, they are likely to own their own homes and automobiles over the course of their lives. Since the onset of liberalisation in the 1990s, this section has been educated into an awareness of its own power and entitlement by the English-language media, which have played up the idea of the newspaper-reading and talk-show-watching citizen as the guardian of the public interest".

Further, Baviskar (2020, p.126) adds that bourgeois environmentalism is a generalised sensibility that exceeds an established class formation. It can also be found diffused among the marginalized working classes who also demand an aesthetic environment and demand the state and the judiciary to act peremptorily and often violently.

Follmann (2016, 2015, 2014) extends this analysis by examining the resistance to concretisation by environmentalists and expands its scope to establish the diversity of environmentalisms being followed in Delhi. However, still, the analysis continues centring the conventionally recognised environmental organisations as 'environmental' and falls

short of recognising the diversity of actors involved. As a result, it fails to capture the trade-offs, power dynamics, values, and principles that bring about vast socio-ecological transformations. As a result, in the thesis, my concern is not with the bourgeois environmentalism of the upper-middle class. My concern is instead with the environmentalism of the 'non-modern' farmers who do not find a space within the imaginary of the rejuvenated Yamuna Plans. My particular interest lies in assessing the organisation of knowledge, imaginary and resistance which is both captured by and simultaneously opposes the dominant discourse of bourgeois environmentalism. For this investigation, along with theoretically making use of bourgeois environmentalism which captures the power dynamics within the Rejuvenated Yamuna Initiative and how it caters to the upper-middle-class and also some desires of the farmers, I also make use of environmentalism of the dispossessed to capture the multiple imaginaries, knowledges and the resistance to these programmes among the farmers that get violently hidden and erased.

In this thesis, by analysing the diversity of environmentalisms of small-scale farmers I address this gap and expand the scope of who and what is recognised as environmental. It is important to examine this multiplicity to comprehensively understand how socio-ecological transformations are shaped, why specific solutions are embedded into policies, how certain sections of society are marginalised and criminalised, how discourses leading to violence and conflict are made dominant and how power moves in formal/informal spaces, shaping resistance. In the future, this analysis can be further diversified and made richer by assessing the multiplicity of environmentalisms by multiple environmental actors at various spatial-temporal scales and levels.

My theoretical contribution can be summarised as thoroughly examining the multiplicity of socio-ecological transformations by analysing the competing environmentalisms of the bourgeois and the dispossessed through the political ecology framework. My empirical contribution can be condensed as providing a nuanced ethnography of farmers in the floodplain in Delhi concerning the formal plans for river rejuvenation. Through these theoretical and empirical contributions, I analyse the intricacies of producing a more just waterscape. The key contributions of the thesis by analysing the diversity of environmentalisms of small-scale farmers are,

1. Contributing to the political ecology framework, I do not just analyse how socio-political factors create nature but also how the romanticised and cultural construction of nature is used to create socio-political segregation and inequalities. Environmentalism is shaped by violence from *above* (Bakker 2007) due to various governmental plans and judicial judgements, from *within* (Negi 2011) due to intersectionalities and *internal* due to biases being internalised by the dispossessed. Apolitical environmental solutions through these simultaneously global, national, and local discourses become an institutional tool to first produce social identities such as 'dirty polluters' and 'criminal' and then violently deal with them.
2. Through this situated analysis, I contribute empirically to the environmental governance literature by unpacking how knowledge is centralised by violently erasing multiplicity. This analysis requires a theoretical expansion of the environmentalism of the bourgeois and the dispossessed as they separately fail to present a holistic account. While ample literature theorises how apolitical techno-scientific knowledge causes widespread dispossession (Resurrección and Elmhirst 2021; Jepson et al. 2017; Maria and Shiva 2014; Pálsson 1996), I analyse the co-option of situated knowledge leads to the same unjust results. The apolitical implementation of any and not just 'western scientific' knowledge, as theorised within bourgeois environmentalism, results in reinforcing power imbalances and producing unjust geographies. While situated knowledge is now being applied in the biodiversity parks, the farmers, who already are aware of aspects of it are still being alienated. Moreover, it is through this situated knowledge, that the farmers are being evicted. While knowledges used are being diversified in the rejuvenated Yamuna initiative, the plans still are shaped by the very neoliberal systems that produced the problem.
3. This situated analysis also extends the theoretical understanding of the environmentalism of the bourgeois and dispossessed theories by breaking the binaries between how they are practised through a combination of formal and informal tools. The official institutions that concern themselves with nature are designed with its singular biophysical understanding. In such limitations within environmental governance, the farmers not only navigate through official and non-official spaces but also, to a certain extent, stretch them to create new more

equitable avenues addressing the larger socio-ecological degradation. This critical environmentalism of the farmers is identified in the thesis. Recognising these contributions can potentially answer the call of forming a red-green resistance (Rengarajan et al. 2018; Bakker 2014; Vallejo and Gloppen 2013; Smith 2005).

4. Viewing nature as an actor steps away from human-centric governance to focus on the more-than-human (Davis et al. 2019; Gill 2016; Furman and Gruenewald 2004). However, an apolitical decentring again produces nature/society division. Here again, a hierarchical order is established with skewed power dynamics where nature gets a place above certain humans. Within the environmentalism of the farmers, while the non-human is recognised as an actor, the socio-ecological waterscape within which all actors sit relatively is identified. This offers a more equitable approach to decentring the human-centric approach by breaking the hierarchical order and shifting the conversation to negotiating power differences better and coevolving.

It is important to note that while I look towards the environmentalism of the farmers through the political ecology framework, they are not being burdened with the responsibility of environmental actions. The intention is not to romanticise 'traditional' ways or claim that these marginalised groups create no pollution. Nor is it to indicate that collective action by all stakeholders works as a magic bullet. In this situated research, farmers merely emerge as one of the actors who due to the play of power dynamics, trade-offs, interests, and values get criminalised and erased for particular environmental solutions to be produced for particular people. It is recognised that farmers participate in the institutionalized process of the state and the judiciary. Their lifestyle and livelihood practices, values, and interests are shaped by these processes. In other words, their environmental practices and resistance are bound by governance processes.

Biro (2013) calls for a socio-ecological community at all scales instead of just looking at downscaling and bottom-up approaches. Resistance is formed through actions both within and against the current governance system (Mayer 2009, p.365). People attempt to secure rights to natural resources by having their claims recognised as legitimate by politico-legal institutions (Sikor and Lund 2009). Thus, the demand to be included within the

institutionalized sets of rights boils down to claims of inclusion within the governance system as it exists. In other words, the aim of the environmentalism of the farmers is not to transform the entire governance system. In Delhi, while certain aspects of environmental policies are challenged such as for the inclusion of the farmers to reside in the city, the underlying systematic factors producing exclusion and dispossession are not targeted (Mayer 2009, p.369). This uncovering allows for the examination of the trope of the poor vulnerable farmer or rich exploitative state/upper-middle-class.

Nor is the aim to stigmatize environmental protection or environmental action by actors such as the environmentalists, state, judiciary, and the upper-middle-class *Dilliwale* altogether. On the other hand, environmental degradation is recognised as a pressing problem.

The intention is to uncover negotiations through interdisciplinary approaches to reveal connections between choices, priorities, and power. It is recognised that there will always be power imbalances. However, a wide range of opinions needs to be considered instead of generalising and simplifying ideas (Nóblega-Carriquiry et al. 2022, p.17). This is done by putting into dialogue the environmentalism of the farmers with the current restoration and rejuvenation initiatives. These complex matters have no singular answer but there is a need to 'stay with the trouble' (Haraway 2016). Such engagement reveals the iterative production of socio-natural boundaries (Hennessy 1993, p.93). And recognises various ways of knowing, modes of life, and values. A transformative environmental action demands the mobilisation of a broad range of voices, interests, values, and imaginaries in the identification of socio-ecological problems, implementation, and solutions. Only then will it be possible to move beyond band-aid policy approaches to achieve more long-lasting and comprehensive socio-ecological solutions (Faber 2008).

This thesis triangulates rich empirical data with city plans and judicial judgements and establishes spatial and temporal factors that dictate environmentalisms. This establishes interaction and exchange along with the tension between the two. This uncovers the various forms of thinking about the environment and extends the analysis of inequalities, power struggles and everyday politics around it.

## 1.7 Structure of the thesis

There are 8 chapters in total.

In chapter 1 I problematise the pioneer river rejuvenation attempts in Delhi. The tensions between river rejuvenation initiative, small-scale farming and urbanisation are emphasised. Here, the river ecosystem has been considered as 'one water' with the recognition of the interconnection between all water bodies in Delhi. Then this research is placed in conversation with environmental governance literature theorising environmentalism of the dispossessed and the bourgeois in India. The widespread marginalisation of the farmers caused by the river rejuvenation initiative is centred as the research focus. The chapter clearly reveals the research questions being explored, the research's aim and the thesis structures.

Chapter 2 dives into the conceptual outlook. A political ecology framework is used to describe the thematic concept of waterscape. Through this, the highly uneven, complex, and multi-scaler socio-political networks within the rejuvenated Yamuna initiative are theorised. This platform is used to examine the environmentalism of the bourgeois and the dispossessed. By looking at the supposed binaries of environmentalisms, I argue that the rich cultural, political, ecological, and economic waterscape in Delhi defies categorization into distinct silos. The transforming waterscape is mapped out to describe the recent blanket implementations of the rejuvenated Yamuna initiative. This space of transition becomes ripe with contradictions, revealing the environmental knowledges being erased, produced, and framed as norms. This leads us to answer the three research questions by first unpacking the socio-political aspects driving action by the farmers, second relating their knowledge with that of the bio-diversity parks being created and third exploring how the farmers beak the limited resistance venues offered to them by the state and the judiciary.

Chapter 3 presents the methodological approach of the thesis. Ethnography becomes a tool to analyse the political ecology of the waterscape. A mix of virtual and on-site ethnography during the COVID-19 pandemic was used. Visual illustration became the key feature of sharing ideas. This unique time presented both an opportunity and a challenge by increasing and decreasing access. The various waves of lockdowns also forced me to adapt and switch

tasks quickly. As a result, my relative positionality placed me both as an insider and as an upper-middle-class outsider. These methodological considerations will be justified.

Chapter 4 presents a thick description of the historic socio-political transformation of the waterscape. For this, I use, Chilla *Khadar* (floodplains) and surrounding areas as the research site. As I arrived at a time of transition where the bio-diversity park was being created, I could compare the vast discrepancies between the claims made in official plans and judicial judgements through which the farmers are being erased to the on-ground realities. This provides rich insight into the comparisons of the waterscapes being lost to the ones being built. It also captures an important snapshot of the two waterscape imaginaries coexisting. This unique data set the tone to answer the three research questions in the following chapters.

Chapter 5 answers the first research question: *What power dynamics are at play in the Yamuna floodplains analysed through the political ecology framework?* This breaks the homogenous group of farmers and views the power dynamics within the group. In other words, the blurred boundaries between the dispossessed and the bourgeois are highlighted. This opens up the possibility of exploring how the various desires of the farmers are formed through not only external factors such as plans and judgements but also internal factors such as claims on land and identity. Here, the intersectionality of the farmers is looked at through the political ecology framework. The complex ecological, cultural, political, and material connections that the farmers have with the river and the floodplains are established. This is followed by how this vital connection is changing and eroding due to the recent policies and inner power dynamics of the group. This sheds light on the diversity of the farmers and the scale of various vulnerabilities, violence, and powers through which they navigate.

Chapter 6 answers the second research question: *How does the environmentalism of the farmers relate to the ongoing rejuvenated Yamuna initiative?* This is answered by making use of the politics of knowledge concept. Placing the apolitical bio-diversity park conceptualisation by the state and the judiciary in conversation with the socio-political environmentalism of the farmers makes possible an analysis of the disjoint solutions to the problems being focused on. This politicisation highlights how the hybrid of cultural, material, and ecological factors defines the understanding of the floodplains, the river, the

pollution, and shapes solutions. By relating the diverse environmental practices at play, the hidden multiplicity within the technoscientific rejuvenated Yamuna initiative is highlighted.

Chapter 7 answers the final research question: *How do the dispossessed negotiate, navigate, and make claims under the rejuvenated Yamuna initiative in Delhi?* First, it is established that the farmers do resist the current policies. Next, institutional restrictions shaping the resistance by not acknowledging the environmental identity of the farmers are highlighted. This is followed by describing the formal and informal tools of resistance used by the farmers and the reason behind these choices. The farmers are utilising tools typically associated with both bourgeois environmentalism and the environmentalism of the dispossessed, challenging established theoretical binaries.

Chapter 8 finally draws together the findings to respond to the research questions discussing the power dynamics of the waterscapes, and the related and competing environmentalisms. This is connected back to the conceptual issues of political ecology. Moreover, it mentions the limitations of the study and states ideas for future research. The contributions of the study by viewing farmers situated in the floodplains of Delhi as active environmental agents expand and interlink the various environmentalisms. The thesis adds to the vast literature on environmental and water governance informing the rejuvenated river initiatives and emphasising a just and equitable transition.

# Chapter 2 Conceptualising the political ecology of Environmentalisms

## 2.1 Introduction

Both nature and society shape each other. To comprehend river pollution and various environmentalisms, socio-political factors cannot be missed. Moreover, as these factors are not static and fixed, it is important to trace them historically. This produces a dynamic and temporal-spatial understanding and reveals how nature and society interact and form each other. This understanding establishes the inequity sewn into various policies being implemented to tackle natural degradation, how it interacts with multiple knowledges, interests, and values and, how resistance is shaped.

In this Chapter, I discuss the theoretical conceptualisation through which these socio-ecological phenomena are analysed. This is done by first politicising the river rejuvenation plans through the political ecology framework. Through the waterscapes concept, this framework is able to analyse the socio-ecological transformations in the floodplains. Next, I explore the interactions among environmental governance theories, bourgeois environmentalism, and the environmentalism of the dispossessed. During this interaction, I explore the similarities and tensions between these theories. This produces a theoretical base for the exploration of the multiplicity of environmental actions and resistance in the floodplains. Following this, the concept of politics of knowledge is established within this theoretical framework through which the erasure of knowledges through framing certain discourses as dominant is analysed.

This conceptualization forms the basis for analysing the power dynamics and violence among actors in the floodplains (Chapter 5), the relationship between the nature of the two environmentalisms (Chapter 6), and their competition (Chapter 7). These three questions reveal the various scales of power and agency, along with vulnerabilities and violence faced by the farmers. These theories and concepts will be essential in answering the research question through empirical data, policies, and judicial judgments.

## 2.2 Conceptualising the political ecology of Yamuna floodplains waterscape

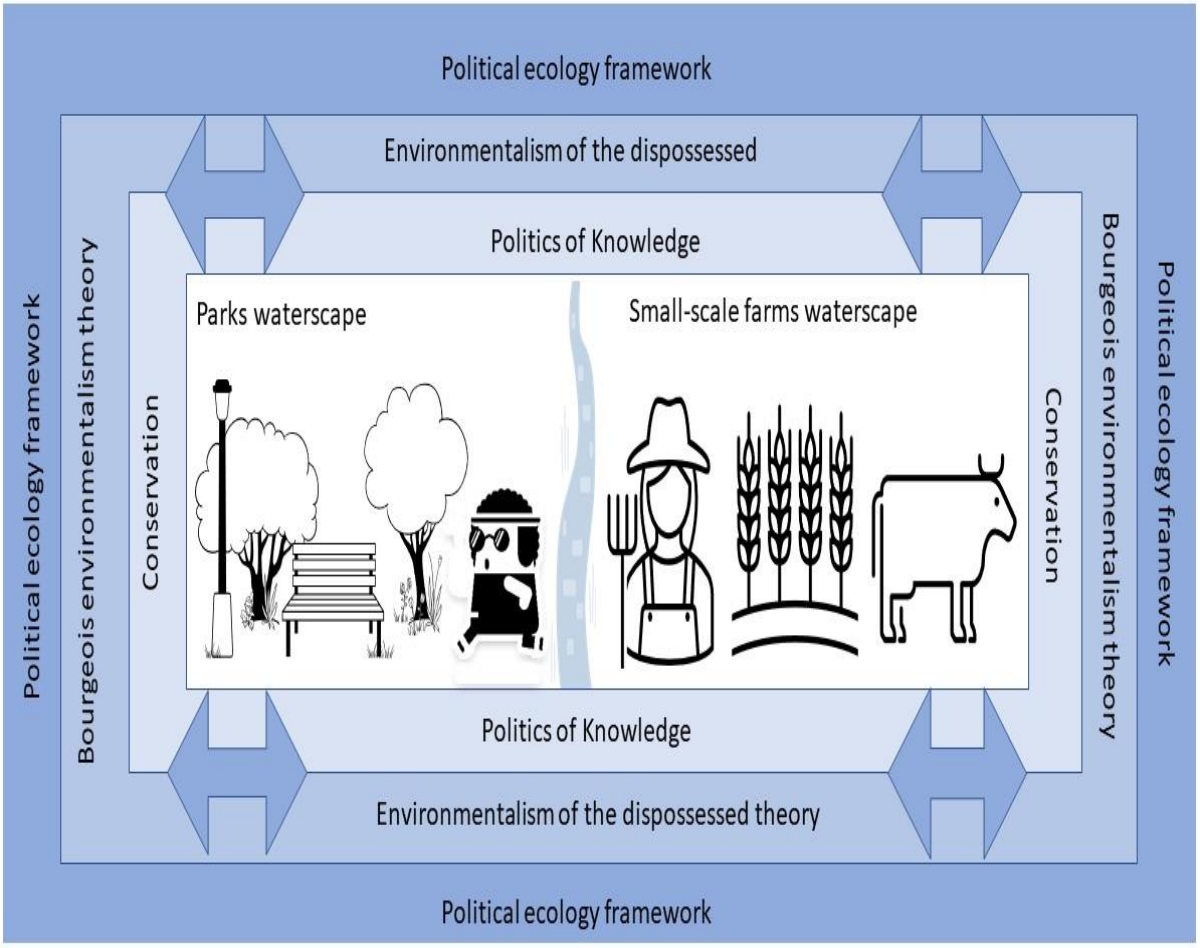


Figure 6. The theoretical conceptualisation of the research, Figure created by Shivani Singhal based on Kotsila et al. (2020), Baviskar (2020, 2019), Anguelovski and Martínez Alier (2014), Swyngedouw (1999).

Figure 6 depicts the theoretical conceptualisation used for this analysis of the Yamuna floodplains in Delhi. The environmental governance in Delhi is full of complexities, overlaps, and fragmentation. These are wrapped in uneven power dynamics. Thus, political ecology, an analytical framework, combining nature and society into a hybrid function and viewing it through power relations is used to study these phenomena. The situated analyses of the Yamuna floodplains are conducted through this framework by using the waterscape lens. The conceptualisation of 'waterscape' introduced by Swyngedouw (1999) to political ecology understands water and power to shape each other through complex interactions full of contradictions, inequalities, and conflicts thereby continuously co-evolving. This

allows a dialogue between waterscapes for the upper-middle-class formed of parks and a waterscape for the farmers formed of small-scale farms (as depicted in Figure 6). Importantly, this dialogue makes space for the possibility of a more equitable waterscape for both the upper-middle-class, the farmers, and a rejuvenated Yamuna.

I argue that the environmental governance of Yamuna floodplains in Delhi involves the interplay of both bourgeois environmentalism and environmentalism of the dispossessed. Baviskar (2020, 2019) conceptualises bourgeois environmentalism theory through a political ecology analysis recognising it to be the dominant form of greening strategies being applied in Delhi. Despite being labelled as 'green,' ecologically degrading urban changes, rooted in violence, are implemented for aesthetic and security purposes. On the other hand, environmentalism of the dispossessed theory borrowing from Anguelovski and Martínez Alier (2014) looks at the marginalised being on the side of nature and against massive exploitation.

I claim that bourgeois environmentalism ideas are remobilised physically and discursively under the current rejuvenated Yamuna initiative to enable the neoliberal transformation of institutions and subjects (Kotsila et al. 2020, p.5) in Delhi. However, there is a differentiation between the rejuvenated Yamuna initiative and bourgeois environmentalism as the former is rooted in environmental restoration and rejuvenation as opposed to the latter being rooted in environmentally unsound development. Thus, while still causing displacement and dispossession, the current rejuvenated Yamuna initiative does go beyond bourgeois environmentalism.

This is ensured by incorporating situated knowledge. Here the concept interacts with the environmentalism of the dispossessed which considers the residents as knowledge bearers who practically work with the environment for survival. However, the farmers are still being displaced from the waterscape being produced.

Thus, farmers are resisting these policies and trying to create advantageous space for themselves within negotiations in a self-interested way thereby creating multiple and overlapping exercises of power. Here too the interaction of environmentalism of the bourgeois and the dispossessed is seen in how the resistance is shaped.

As stated in the previous chapter, environmentalism in Delhi until now has been analysed by looking at bourgeois environmentalism through a political ecology framework. This thesis while making use of this examines the current waterscape being produced through also incorporating environmentalism of the dispossessed theory. The aim is to analyse why the marginalised fail to be included within the waterscape being produced and how they resist this.

## 2.3 The political ecology of waterscapes in Delhi

Scholarship by Baviskar (2020, 2019), Bhan (2016, 2009), and Follmann (2016, 2015, 2014) has established that Indian cities, particularly Delhi, are characterized by highly uneven political ecologies. Nature here is produced and managed through politics. Thus, its restoration through the current plans must attend to these factors. New forms of governmentality and socio-ecological spaces are created through new discourses (Smith and Ruiters 2006, p.194). Thus, while environments contain complex multiscalar social relations and networks within them, they are sought to be fixed by technical plans and laws such as the rejuvenated Yamuna initiative being implemented in Delhi floodplains. Similar to the environmental governance pattern in Delhi, though projected as an apolitical rational scientific process, it is inherently about power and controlling spaces and subjects (Baviskar 2020, p.39). In other words, the current environmental governance in Delhi aims to produce a governable space. This hierarchical agenda privileges certain environmental issues and visions. Packaged in an environmental narrative, this violence gains legitimacy. In the process, it not only depoliticizes and divorces the socio-environmental debate but also hides social damage (Zhouri 2017; Padhi 2007).

Although the Indian judiciary and state claim to integrate human and environmental elements on paper, it is not translated into reality (Karim 2012, p.33). Paradoxically, voluminous environmental and human rights laws and policies go hand in hand with the continuous erosion of collective rights of the marginalised (Randeria 2003, p.312). Human rights to the environment along with environmental rights are being applied under the conservation mandate and creating socio-ecological tensions. How such policies end up increasing the nature/society divide has been elaborated on below. As a result, the human

right to a clean environment gets denied to some on the intersectional bases of class, ethnicity, modernity, religion and so on.

Political ecology is a framework for analysing nature as a space of power that reveals complexities, tensions, risks, trade-offs, contestation, accommodation, opportunities, meaning making, and recognition at different levels. Political ecology teases out the complexities within environmental governance and analyses the (re)production of inequalities (Cornea et al. 2017, p.729). Thus, there is a need for the rejuvenated Yamuna initiative to critically engage with the political ecology framework to acknowledge opposing perceptions, needs, and wants (Nóblega-Carriquiry et al. 2022; Scott et al. 2016). This thesis seeks to generate a situated political ecology analysis through an engagement with the everyday rooted in local contexts and identities (Lawhon et al. 2014).

### 2.3.1 Political ecology framework

Research linking environmental change to socio-political marginalisation emerged in the 1970s (Robbins 2019, p.23). It addresses the question of why inequitable solutions persist despite the availability of better alternatives? This is answered by the political ecology framework by making central the analyses of who profits from the socio-ecological transition and what is the trade-off. Political ecology thus empirically roots socio-ecological contradictions that cause unsustainable and unjust outcomes (Robbins 2019, p.97).

Socio-ecological changes, while generally framed as apolitical, are not neutral (Robbins 2019). Environmental change thus needs to be politicised (Bryant and Bailey 1997). In simpler terms, political and ecological factors are closely intertwined. The biological matter affects politics and vice versa causing socio-ecological transformations (Swyngedouw 2023, p.131). Political ecology states that the environment is produced by social power relations, and they co-determine each other (Heynen et al. 2006; Swyngedouw 2004). These complexities that (re)produce waterscapes need to be untangled. Ecosystems need to be seen in terms of being reflexive complex systems to introduce historical human agency and interpretation (Martinez-Alier et al. 1998, p.284). They are produced, dissembled, and reassembled through power dynamics (Swyngedouw 2023). In other words, nature and society coevolve. Thus, people and materials are mutually involved in the environment becoming ‘enmeshed’ (Ingold 1992). This forms diverse socio-ecological relations within

which both perform the entangled role of objects and subjects. In other words, socio-ecological processes are interwoven web of historical, ideological, material, discursive, and cultural factors (Swyngedouw 2004). As a result, we work within and not upon the world. The 'hybrid' (Latour 1993) 'socionature' (Swyngedouw 1999) breaks the binaries of society and nature and views it through power relations (Zimmer et al. 2020, p.227). Therefore, this thesis examines the political and ecological processes that make and remake urban waterscapes.

It is important to notice here that political ecology, with its roots in Marxism, mainly focuses on human labour serving to produce nature politicising it (Foster 2000). However, to study environmentalism in Delhi, special attention needs to be paid to how nature is being used to produce human categories such as dirty, illegal, unmodern, backward, illiterate, and outsider, giving access to limited sections of the society. Thus, the construction of nature goes hand in hand with the construction of society.

Thus, both nature and society are not domains of reality and rather refer to specific forms of public organisations (Latour 2004, p.53). Various stakeholders have multiple interests and struggle to control the environment (Sankar and Suresh 2023, p.8). Power relations among competing concepts, ideologies and values are at work in producing and organising oppression and exploitation of both society and nature. Social reactions, scientific solutions, judicial laws, cultural pressures, policies, and economic intervention are all instrumental to governance. Power and conflict determine who can avail of rights and who faces insecurity, creating an inequitable hydro-social cycle. However, these complex processes situated in socio-historical changes are projected as naturalised. Political ecology highlights that nature is shaped by politics, institutions, relationships, ideologies, and processes (Workman 2019). These anthropological influences reproduce spatiality. In other words, the environment is socio-politically constructed based on historical trajectories (Norgaard 1994). Therefore, historical socio-ecological factors are important to be examined to understand the physical and political makeup of a place.

However, conventional environmentalism often follows a top-down structure, neglecting concerns about the marginalised. In Delhi, this has been studied through 'bourgeois environmentalism theory'. Globally too, environmentalists and human rights advocates regularly clash (Rajan 2011, p.106). Langlois (1982, p.281) states that "the environmentalist

is concerned with basic human rights to no greater extent than is the utilitarian economist". Most environmental projects fail to satisfy the tenet that no marginalized group should be left worse off (Ingram et al. 2008, p.16). Thus, basic human needs are denied, and the trade-off is considered fair and just. These enable mobilizing narratives of epistemic superiority that allow ignoring and dismissing the concerns of displacement and dispossession (Haiven 2013). These inequalities produce processes where the most affected people end up having the least say. Overall, while environmentalists have stopped mass environmental degradation in some cases, they have not shown the same activeness in supporting the marginalised. Thus, when the marginalised sections of society are not involved in environmental actions, it cannot be considered equitable. Unpacking these processes presents an opportunity to psychoanalyse the underlying material conditions of why and how things occur, who gains and who pays (Haiven 2013). This challenges the Anthropocene notions of all humans being a cause of the environmental catastrophe. Therefore, attention needs to be paid to the production of injustices in the social order.

### 2.3.2 Power within the political ecology framework

So, complex, multiple, and intertwined socio-ecological realities are political (Mol 2003, p.7). Power is the core theme of political ecology (Paulson and Gezon 2005; Peet and Watts 2004). This is because unequal socio-political power is the underlying drive of inequitable environmental changes. Similarly, the waterscape lens understands water and power to shape each other through complex interactions full of contradictions, inequalities, and conflicts thereby continuously co-evolving socio-nature. Ecological sites become complex spaces intertwined with urbanisation, power, conflict, violence, and desire. Therefore, dynamic ecological changes need to focus on uncovering complex power networks. This multi-approach to understanding power in environmental governance becomes the strength of political ecology (Svarstad et al. 2018, p.360).

Power is defined by Bratton (2012, p.233) as "the ability to secure compliance to one's will." Everyone possesses power, is affected by it, pursues it, and uses it (Gaventa 2006). No one actor is ever able to maximise power to the point where they are able to implement their will without being contested. Societal institutions, formal positions and mandates do not inherently hold power and are unstable (Ribot and Peluso 2003). Instead, authority is repeatedly exercised through social relations. In other words, actors enjoy relative or partial

autonomy (Bratton 2012, p.237). Thus, power is produced in encounters between various factors such as spaces, actors, discourses, institutions, knowledges, and practices across multiple levels (Ahlborg and Nightingale 2018, p.387). It results from an interaction between multiscale political, economic, cultural, and ecological processes at different temporal and spatial scales (Watts 2013).

Power results from the interaction between people, institutions, and knowledge. Here, power is deployed, contested, negotiated, and reworked (Acharya 2017, p.375). In other words, it rejects the apolitical nature of ecologies and instead brings it back to the network of politics while recognising the material qualities at play in shaping the waterscape. Therefore, it is able to consider shifting imaginaries (Cornea et al. 2017), heterogeneous ontologies and the role of knowledge (Karpouzoglou and Zimmer 2016; Swyngedouw 2004). This both refines and challenges hegemony (Acharya 2017).

Multiple forms of 'governmentality' (Foucault 1991) demonstrate that various forms of power can be exercised to various ends by various actors (Ahlborg and Nightingale 2018, p.386). Binaries of exploitation/repression, privilege/exclusion, participation/marginality, and domination/subordination hide the historically specific multi-scale power relations at play. Instead, power is deployed and mobilised in various ways by various actors. People hold different positions within the hierarchical social structure, occupying and understanding it differently (Vasan 2021, p.164). These result in simultaneous lived experiences of exclusion and inclusion. People are situated on various scales on these axes at the same time and keep on moving (Heynen et al. 2006). This makes power existing along a flexible continuum work through multiple linkages and dimensions simultaneously (Gaventa 2006). In other words, they do not fit into a static category but flow between various positions (Kaika 2005, p.13). Thus, power is relational, iterative, situational, ambiguous, contradictory, dense, dynamic, and omnipresent (Hua et al. 2022; Morrison et al. 2019; Flyvberg 1998).

Thus, through political ecology, it is understood that power works in both multiple and specific rationalities and discourses forming socioecological relationships and waterscapes (Ahlborg and Nightingale 2018, p.387). The fluidity of these processes and intersections across scale and space can be highlighted using political ecology. It considers the power dynamic of these historical and geographical processes called 'resource complex' (Watts

2004). This actively avoids reductionist pitfalls by examining situated perspectives and violent processes (le Billon 2017, p.178).

## 2.4 Theorising environmental governance in India

Environmental governance refers to "the set of regulatory processes, mechanisms and organisations through which political actors influence environmental actions and outcomes" (Lemos and Agrawal 2006, p.298). It includes both formal and informal structures where political, social, economic, administrative, and cultural systems develop and manage water resources (Hoekstra 2011). This change is based on the multilevel, polycentric system involving many actors. As a result, there is a need to evaluate social and institutional interdependencies (Pahl-Wostl et al. 2012). Therefore, informal processes are equally as important as formal processes of governance. There is an international recognition that environmental and human rights are significant components of each other (Pring & Pring 2016). As a result, the need is to find synergies that mutually reinforce this confluence (Pring & Pring 2010). Environmentalism of the dispossessed theory recognises that one of the best ways to protect the environment is to uphold basic human rights (Odeyemi 2015; Agyeman et al. 2002). This has been elaborated on below. An emphasis is placed here on issues of justice and move away from paying too much attention to issues of environmental quality (Agyeman et al. 2002, p.86). As a result, the focus turns to the larger neoliberal processes that violently reinforce socio-ecological degradation and manifest in polluted environments, poverty, food insecurity, climate change and so on. The evolution of this conceptualisation opens new possibilities.

In India, environmental governance generally involves a multiplicity of agencies, overlapping jurisdictions, and fragmented and ill-defined responsibilities (Follmann 2016). These responsibilities are often shrouded by unequal power relations. While most institutes have adopted both human and environmental rights in some way or the other few have approached them in an ingrained manner to capture its complexity and deepness (Agyeman et al. 2002, p.88). Thus, a holistic approach to governance is a pressing issue.

### 2.4.1 Breaking binaries between environmentalisms

This thesis uses the theories of bourgeois environmentalism and environmentalism of the dispossessed to analyse the eviction of small-scale farmers for the construction of bio-

diversity parks on the Delhi floodplains. How this thesis theorises their interaction with each other is elaborated on below.

According to Peet et al. (2011), neoliberalism unequivocally favours the wealthy. This is replicated even in environmentalism (Baviskar 2020, p.76). Therefore, neoliberalism produces environment catering and benefitting almost exclusively the rich. Baviskar (2020, 2019) theorises this phenomenon through 'bourgeois environmentalism' which she defines as an organised force in Delhi based on upper-middle-class concerns around aesthetics, leisure, safety, and health that have significantly shaped the disposition of urban spaces. It mobilises "the discourse of 'public interest' and 'citizenship' to articulate civic concerns in a manner that constitutes a public that excludes the city's poorer sections" (Baviskar 2020, p.110). Here the environment is turned into a commodity and extended for the consumption of the upper-middle-class leading to exclusionary policies (Baviskar 2020; Turnhout 2018; Brownlow 2006). Baviskar (2020, p.166) calls this 'commodity aesthetics' and Fletcher et al. (2017) name this commodification, Nature$^{TM}$. Thus, nature becomes a tool for accumulating monetary and social capital.

The use of market and development to solve environmental problems (Bakker 2007, p.431) has been theorised in many other ways such as neoliberal environmentalism, market environmentalism, wilderness environmentalism (Inglehart 1995), armchair environmentalism, upper-middle-class environmentalism (Mawdsley 2004), liberal environmentalism, post-materialist environmentalism, green neoliberalism (Baviskar 2020, p.121) and conservationism (Nixon 2013; Freitas and Mozine 2017). However, I use Baviskar's (2020, 2019) term 'bourgeois environmentalism' to place this thesis within the literature stemming from it. This is specifically done as bourgeois environmentalism was born in Delhi and is based around the Yamuna and other natural features of Delhi such as the Ridge (Baviskar 2020). This theory is now leading environmental research in Delhi (Narayanan 2019; Lal and Pradhan 2019; Jain 2018; Karpouzoglou and Zimmer 2016; Follmann 2016, 2015, 2014; Srivastava 2015; Brosius 2010; Gill 2009; Chaturvedi and Gidwani 2011; Ghertner 2011; Mehra 2009), India (Pessina 2018; Cornea et al. 2017;

Rademacher and Sivaramakrishnan 2013; Mawdsley et al. 2009; McFarlane 2008) and globally (Anguelovski et al. 2019; Zimmer 2017).

The second concept used in this thesis to analyse the environmental governance within the Yamuna waterscape in Delhi is the environmentalism of the dispossessed. Borrowing from Anguelovski and Martínez-Alier (2014), environmentalism of the dispossessed, looks at the marginalised being on the side of nature and against massive exploitation by various actors such as the state and corporations. Environmentalism of the dispossessed originates through social conflicts over access to and control of natural resources (Guha and Martínez-Alier 1997). This sort of environmentalism goes beyond the aesthetic appreciation or purely quantitative scientific analysis of nature (Zhang 2010, p.181). It confronts socio-economic power structures that cause the very environmental crisis being fought against. Instead of focusing on a singular environmental problem, environmentalism of the dispossessed extends its critique to incorporate the structures of inequality thereby showcasing that the ecological and social justice fight is one and the same. It emphasises that for well-rounded environmental protection and development, the well-being of the vulnerable sections must be factored in. This includes factors such as livelihood, survival, recreation, identity, citizenship, land and so on. All these aspects are seen as environmental issues through the environmentalism of the dispossessed.

Historically, environmentalism in India has been dominated by 'environmentalism of the poor' (Vasan 2021; Pessina 2018; Kashwan 2018; Bryant 2017; Kumar 2016; Babu 2016; Pradhan and Dash 2014; Guha and Martinez-Alier 1997; Ciafone 2012; Linkenbach 2009; Guha 2008; Dobson 2007; Rangan 2004). It can be traced back to protests against the commercialization of forests such as the Bengal peasant revolt of 1859- 63 against indigo plantations (Roy and Martinez-Alier 2019, p.79). Currently, it is often associated solely with rural advocacy such as the *Chipko* movement (tree hugger movement), the Narmada *Bachao* movement (Save Narmada River movement), or Chhattisgarh *Mukti Morcha* (Chhattisgarh Liberation Front) (Baviskar 2005). Similar environmentalism theories exist such as subaltern environmentalism, environmentalism of the indigenous, environmentalism of the deprived, livelihood environmentalism, and people's environmentalism (Martínez-Alier 2020). Initially, Martínez-Alier (2007) framed this as

'environmentalism of the poor'. However, I use his reframed 'environmentalism of the dispossessed'. Joan Martínez-Alier explained this reframing in the University of Sussex webinar in April 2022 asserting that people weren't inherently poor but had been impoverished through dispossession.

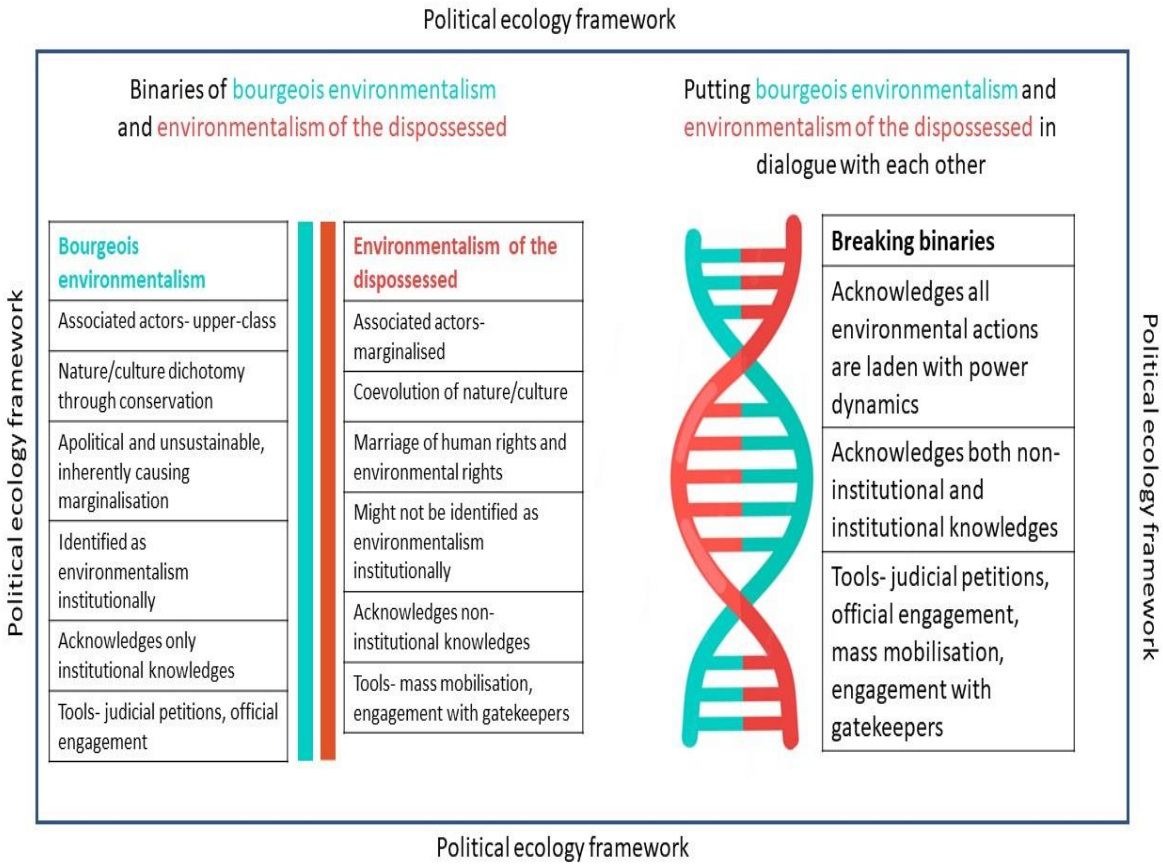


Figure 7. Putting bourgeois environmentalism and environmentalism of the dispossessed in dialogue with each other. Figure created by Shivani Singhal based on Baviskar (2020, 2019), Anguelovski and Martínez-Alier (2014), (Zhang 2010), Guha and Martínez-Alier (2006).

Figure 7 depicts the forthcoming discussions about bourgeois environmentalism and the environmentalism of the dispossessed. It focuses on the nature/culture relations, politicisation of natural conservation, inherent marginalisation within institutional policies, recognition as environmental, acknowledgement of knowledges and varying tools used by actors situated within these discourses. It clearly lays down how this thesis puts the two environmentalisms in dialogue with each other based on the empirical findings through the political ecology framework guided by the research questions. Chapter 5 focuses on the

power dynamics within the Yamuna waterscape in Delhi. Chapter 6 puts multiple knowledges in dialogue with each other to broaden their scope and promote a more just understanding. The final empirical chapter 7 analyses the various environmental tools used, how they compete and where they align.

These theoretical discussions have been elaborated on below. First, apolitical bourgeois environmental conservation producing nature/culture dichotomy will be discussed to analyse the creation of enclosed bio-diversity parks through the Yamuna rejuvenation initiative. Then, the power dynamics within the farmers will be analysed by addressing the complexities within the environmentalism of the dispossessed. This will lead to the politics of knowledge concept to examine the erasure of multiple knowledges within such apolitical environmental initiatives.

## 2.5 Bourgeois environmentalism

Bio-diversity parks being created within the rejuvenated Yamuna initiative are being classified as blue-green infrastructure in Delhi (DDA 2021). Blue-green assets have become big businesses within the green economy (Fairhead et al. 2012, p.240). Without being equitable, they become innovative new methods to promote the green economy (Escobedo et al. 2019, p.5). Environmentalism in such a case remains limited to green consumption in the masses. The environment is commodified, not despite but through the socio-ecological degradation caused by it. These factors make power more elusive (Hua et al. 2022, p.2) and in turn neoliberalism more durable (Ahlborg and Nightingale 2018, p.387).

This sort of non-political environmentalism by the upper-middle-class fails to deal with the root cause of ecological degradation. It is fundamentally contradictory as environmental concerns are addressed through conservation and beautification while at the same time process of consumption and segregation which are primary reasons for the polluted environment are encouraged (Follmann 2014, p.123). Therefore, it turns a blind eye to environmental degradation from a consumerist lifestyle and instead focuses on villainising ‘non-modern’ occupations such as farming and human presence in green areas (Ciafone 2012, p.129). At the same time, the upper-middle-class fails to acknowledge their complicity in the degradation (Baviskar 2020, p.17). As a result, this sort of environmentalism while

acknowledging ecological problems, turns to the very same neoliberal systems that produced these problems. This 'paradoxical idea' presents itself to be a solution to the very problem it is creating and becomes a grave threat (Nixon 2013; Büscher 2012).

This process hinges in Delhi on an aspiration to gain membership into the cluster of the so-called 'world-class' cities through instituted socio-spatial changes (Negi 2011). Neoliberal policies in urban governance are profoundly remaking socio-spatial and occupation patterns globally with an 'entrepreneurial turn' (Harvey 1989). This is characterised by a loosening and dismantling of various institutional constraints and hyper-exploitation of informal workers (Gill 2016, p.136). The aim is to 'reform' cities to make them become geostrategic points to capture the circulation of global finance, services, tourism and so on (Cornea and Zimmer 2017; Follmann 2014; Banerjee-Guha 2011; Batra 2007). Liberalisation led to the push of cities being staged as potential economic powerhouses and having a classist nature that is based on consumption and wealth generation. In the Indian context, liberalisation does not refer to the opposing state and market views. This is done by making the cities investment-friendly by getting a favourable credit rating. Among other things, at a city level, this includes increased gentrification and inequitable urban restructuring. Now the city is re-branded to be sold with green spaces as its Unique Selling Point (USP).

It is important to note that economic liberalisation in India (1991) does not refer to the opposing state and market views. Rather the state and market find new methods of profit-building in the liberalised economy (Ahmed et al. 2011). As a result, is also called state-led liberalisation (Fernandes 2006, p.152). Through public-private partnership (PPP) big builders and developers are able to bag big contracts from public agencies without public consultation (Maitra 2011, p.114). How the (draft) Master Plan Delhi 2041 (2021, p.11) introduces PPP to 'regenerate' 'brownfields' and its implication on the rejuvenated Yamuna initiative has been elaborated on in Chapter 4. The capital requirements stipulated in the eligibility criteria exclude most people who have historically used the resources. The substantial nexus between politicians and contractors leads to deep-seated corruption involving peddling activities, patronage, cronyism, and financial embezzlement in approving projects (Baviskar 2020; Nagarwal and Kumar 2016).

Within this, certain environmentalisms reorder the urban space by detaching themselves from social justice principles and moving away from ground-level collective mobilisation (Baviskar 2020, p.58). These policies formed in a strongly liberalised, privatised, and globalised environment by subverting the welfarist post-Independence policies have morphed the Indian urban landscape out of recognition with a zealousness and urgency and largely empower the upper-middle-class (Batra 2007). On the other hand, there is an antipathy towards the 'informal' spaces and people marking a critical shift in how they are represented, governed, and judged (Bhan 2009, p.131). In Delhi this is to the extent that people in informal spaces and occupations are not only framed as outside the sphere of citizenship but as the pollution that needs to be dealt with. This is institutionalised by legalising places and people based on whether they fit into a 'world-class' aesthetic.

Therefore, this prosperous imagery masks the deep-rooted limitations. It gives rise to a dual city, with select groups benefiting. Thus, this exclusive city planning is practised using environmental agendas to meet the ends of leisure and power for investors and consumers (Mukherjee and Chakraborty 2016, p.79). A 'green' city, and not a socio-ecologically healthy city, becomes the epitome of a liveable city in the 21st century. The environment here is produced as a space for 'modern' people. Therefore, this 'urban' environment is supported by the upper-middle-class (Ahmed et al. 2011). It has no space for various environmental imaginaries to co-exist (Brosius 2010, p.4). Therefore, harsh, and intolerant liberalised environmental policies have worsened inequalities (Baviskar 2020, p.208).

Thus, the environment has been commodified and is now an investment. As a result, this investment needs to be protected on a large scale. Nature now gets fixed, located, and preserved outside culture. Conserved nature is used as a magnet for global investment, labour, and tourism (Krings and Schusler 2020, p.321). It delinks sustainability, equity, and justice to take on grand 'green' projects.

### 2.5.1 Conservation through Enclosure

The restoration and rejuvenation of the floodplains involve enclosing the area and evicting the current residents for the conservation of nature. Seen in the form of natural reserves in

the rural areas earlier, this has now taken an urban turn in the form of biodiversity parks. Primarily, tools employed for this remaking of nature include the creation of nature-based aesthetic tourism (Fletcher et al. 2017), parks and sanctuaries (Baviskar 2020), sustainability projects, and 'green' initiatives are used for this remaking of nature (Anguelovski and Martínez Alier 2014; Conca 2005). Overall, the management of natural resources in the neoliberal era takes the form of producing protected natures and 'purified' spaces for 'charismatic megafauna' (Davis 1996). Expanding on this, Mertig and Dunlap (2001) claim that conservation policies are only interested in the preservation of plants, animals, trees, lakes, and so on. This focus on singular nature continues the nature/culture dichotomy (Claus et al. 2017, p.292). In this approach, the co-evolution of both nature and society is superseded by the sole focus on nature conservation, leading to a separation of human and environmental rights. It recasts the meaning of environment, progress, citizenship, democracy, modernity, and development.

Hence, conservation projects come directly in conflict with people leading to injustice (Hua et al. 2022; Prabhakar and Gadgil 1996). They are usually created through coercive power and hegemonic regulation (Hua et al. 2022, p.3). This environment is produced globally through the authoritarian accumulation of land by dispossession (Krings and Schusler 2020; Conca 2005). This environmentalism involving setting up conservation reserves excluding local people is labelled as a form of cultural imperialism through 'draconian powers' by Guha (1999). Thus, conservation has mostly been related to the commodification of nature for the consumption of a few based on power dynamics.

As a result, several studies have marked that protected areas for ecological conservation have unanticipated negative social outcomes due to which their goals of sustainable development fail (Hua et al. 2022; Oldekop et al. 2016; Van Schaik et al. 1997). Power analysis through political ecology can effectively explain this failure (Robbins 2019). It is important to note that while political ecology outlines the power imbalances within conservation programmes, it is not opposed to conservation. On the other hand, through political ecology, the problems within these spaces leading to the failure of the sustainability goals get highlighted.

### 2.5.2 Ingrained marginalisation and dispossession

Bourgeois environmentalism cannot work towards social-ecological justice as it runs on exclusionary economic priorities and socio-spatial differentiation (McFarlane 2008, p.431). Marginalisation is a process where certain sections are forced to systematically rotate in social, political, ecological, and economic isolation. According to Das and Sherma (1998), oppression results from hierarchy, which, in turn, is a consequence of the self/other opposition. Exclusion has been a process to establish and maintain political power, and physical and psychological security throughout history (Samhat 2000, p.602). This degrades the socio-political fabric of the city further.

As discussed above, attempts to restore, and rejuvenate the river then can be founded on principles of conservation, aesthetics, health, security, and recreation. These inherently exclude the livelihood and residence needs of the marginalised. Thus, practised on the ground, it involves the violence of evictions and relocations. Such violence is both swift in terms of evictions and slow in terms of framing the marginalized as villains and othering them structurally, culturally, and ecologically. Thus, both the 'unregulated' nature and people are controlled in a utilitarian way (Nixon 2013, p.164). As a result, often, the marginalized living in these areas are evicted without much regard or compensation. The eviction doesn't only displace them from their homes, livelihoods, and knowledge; it also denies them citizenship and the benefits of nation-building. Emptiness is created out of a land inhabited by 'underdeveloped people' for 'underdeveloped purposes' (Nixon 2013, p.165). Harcourt (2012) emphasizes the vast social cost of these protected natures and calls these 'lost spaces'. This is done purposefully and ruthlessly. Nixon (2013) calls this process of erasure 'spatial amnesia' and 'a short-term psychology of denial' where communities are physically and imaginatively removed from the memory of the place.

This marginalisation and social division are so historically grounded that they are often taken as facts. Solutions stemming from bourgeois environmentalism are founded on these historical social divisions. Any resistance to this ingrained marginalisation within the idolized green development and growth is seen as backward and regressive, something blocking progress (Peet 2011). In other words, exploitation is greenwashed as environmentalism. Thus, evidence of inequality created is hidden. In the long term, this hidden inequality and violence seep back into cities in the form of urban slums and informal/illegal occupations.

This ‘developmental refugee’ mirrors the shortcomings of neoliberal development (Nixon 2013, p.152).

In the face of the social cost of environmental projects, bourgeois environmentalism tends to frame the complexities as a long-term benefit for all and a short-term cost for some, at best. This hides the socio-political disparities of cost and benefit. This also projects a fake encounter between the marginalised and the environment (Baviskar 2020, p.47). Fundamentally, these pit various sections of the society against each other. However, Ravindran (2000) states that urban planning which progressively marginalized both the urban environment and the poor is now faking an encounter between the two. It not only erases the very marginalized who are the most affected by environmental degradation but also villainizes them. As a result, while bourgeois environmentalism might produce green spaces, it cannot produce an equitable waterscape.

## 2.6 Environmentalism of the dispossessed

Oladipo (2007) argues that usually the terms ‘environmentalist’ and ‘minority’ conjure two distinct images in people’s minds. Bourgeois environmentalism views environmentalism as distinct from social justice. Thus, bourgeois environmental movements have moved away from ground-up actions involving the residents to dealing directly with the state and the judiciary. This is important because Rao (2013) states that recognition as just ‘poor’ does not go very far in being granted rights. How this separation is institutionalised and leads to marginalisation is expanded on in chapter 4. Environmentalism of the dispossessed becomes an answer to analysing these complex and subjective identities.

Environmental concerns are central to sustainable livelihoods (Bakker 2011, p.350). They are both threatened under the global neoliberal systems of privatisation and commercialisation. These livelihoods are underscored by subsistence and survival instead of accumulation. Through a political ecology framework, these issues are addressed by highlighting sharp inequalities ingrained within technical conservation mandates as seen in the Rejuvenated Yamuna initiative. This avoids a limited focus on institutional fixes and instead challenges the critical drivers of socio-ecological decline (Peet et al. 2011, p. 27).

While livelihood concerns are legitimate in their own right, it is important to highlight actions of the marginalised as ‘environmentalism’ to push back claims by the state and the

judiciary tagging these sections of the society as mass polluters. These claims echo the trope of statements like poor people are too poor to be green, they are not interested in the environment, they first need to develop and then they can practice environmentalism (Kashwan 2018, p.34), while environmental sensibilities and practices are present in rural communities, they are rooted in survival and not environmentalism (Nixon 2013, p.254) and so on.

Different languages of resistance might be deployed relating to livelihood, residence, human rights, and environmental protection. Actions often start as livelihood struggles (Linkenbach 2009, p.18). However, these cannot be understood independently. Environmentalism of the dispossessed relates concerns specifically where the environment is a source of livelihood (Anguelovski and Martinez-Alier 2014). It is important to trace the material, political and discursive effects that environmental policies have on livelihoods. When a political ecology framework is employed to analyse these complex intersections, a terrain of contestation and debate with different interests and claims opens (Murray Li 2007).

On the other hand, by not boxing themselves as solely environmental, the marginalised present a unifying force of resistance shifting away from the traditional binary or we/they politics attached to rigid and exclusionary defined channels of environmentalism/livelihood, traditional/modern, beautification/ecological, and so forth. Here the focus is on inclusion aimed at building effective coalitions and achieving greater justice. This develops new urban spatial sensibilities (Soja 2010).

Environmentalism of the dispossessed does not see environmentalism as a luxury good. This recognition is important as it links socio-economic justice and environmental degradation. Therefore, this sort of environmentalism is social, political, and cultural at its core. As a result, it goes beyond talking solely about the environment. In the case of Delhi specifically, it also extends to housing rights. Here ‘green’ nature is merged with ‘red’ social politics. Guha and Martinez-Alier (1997) call it “red on the outside, but green on the inside”.

Here it is important to factor in that people might not use the word ‘environmentalism’ and might even degrade the natural surroundings in a purely environmental sense. In other words, their actions might go against purely conservation mandates, and they might even oppose it. As a result, the environmentalism of the dispossessed does not sit comfortably into the global mainstream definitions of environmentalism discussed above. However,

even though the practices of the people in question might not be considered completely environmental, their lifestyle and practices are still less destructive than those of the upper-middle-class. As a result, their lifestyle can be considered as against mass exploitation of the environment (Anguelovski and Martínez-Alier 2014).

Environmentalism of the dispossessed expands the scope of what an environmental issue is, who takes part in environmentalism, and which actions are considered environmental. Chapter 7 elaborates on the environmental practices of the small-scale farmers in the Yamuna Floodplains of Delhi. It takes the form of actions such as litigation, advocating for land-use changes, and promoting a sustainable lifestyle. They have been able to mobilize electronically, judicially, in the media, and so on. Multiple tactics are used at a time to meet ends. Socioeconomic factors dictate one's capacity to act. New networks and means are established in the process. It goes beyond using the usual tactics of the 'weak' such as dialogue, confrontation, blockades, riots, and protests (Odeyemi 2015, p.60). In some cases, direct judicial action is taken. While the other time negotiations with the government and spreading awareness through the media are used. The vocabulary and means of protest keep on evolving. As diverse vocabulary is used, these movements might not be identified as entirely or even partially environmental at first glance (Guha and Martínez-Alier 1997, p.15).

Globally there are various actions taken by the poor regarding natural resources. However, they are not usually considered under the environmental umbrella. Martínez-Alier (2020, p.85) lists examples of environmentalism of the dispossessed such as the movement of Chico Mended and the *atingidos por barragens* in Brazil, the movement against Shell in the Niger Delta, against eucalyptus in Thailand, against copper mining in Japan. However, is there no such movement in the urban sphere? And what form does such a movement in the urban sphere take? In the same way that the marginalized in forests fight for their land, identity, and survival, the marginalized in urban floodplains do the same. In cities the distribution of the environmental 'bads' and 'goods' is unequal and the blame for the pollution is shifted to some. They defend their right to their lifestyle in the same way as the indigenous in rural areas. These vulnerable sections in the city also practice environmentalism which while not fitting into the category of mainstream environmentalism and might even oppose conservation, is inherently against the mass exploitation of nature. Moreover, their motivations and actions are not post-materialist

(Martinez-Alier et al. 2016, p.743). In other words, they do not oppose development. Moreover, due to evictions and environmental degradation, they are diversifying to new occupations such as unsustainable construction which goes against environmentalism. Environmentalism of the dispossessed primarily focuses on sustainable livelihood concerns and environmental governance in rural areas, through the urban political ecology framework this scope can be extended to evaluate similar contexts in urban areas.

This gap will be addressed in the thesis by analysing how small-scale farmers in Delhi Yamuna floodplains face multilevel structural inequalities due to bourgeois environmental discourses in chapter 5, how they oppose conservation and mass exploitation of natural resources by politicising the debate while at the same time also being captured by the imaginary of a 'charismatic megafauna' to a large extent in chapter 6, and how despite institutional barriers, attempts are made to make claims through formal and informal means in chapter 7.

### 2.6.1 Complexities within environmentalism of the dispossessed

Movements end up producing material and symbolic identities within unequal structures of power and violence (Baviskar 2005, p.172). How these struggles are represented, who they are opposing, and who is supporting them are all factors that lead to their political trajectory. Labelling social movements as environmental may impose specific discourse rules, prioritizing certain claims over others. Williams and Mawdsley (2006) also caution against promoting polarised, rose-tinted, and simplified experiences under the environmentalism of the dispossessed. This romanticizes the past society which was not entirely egalitarian in terms of gender, caste, and religion to name a few. The struggles against eviction and pollution through this discourse might be framed as struggles to restore a pre-existing lifestyle. However, there is a danger of framing actors such as farmers, *adivasis*, fisherfolk, and women as heroes, and the state, and businesses as villains (Williams and Mawdsley 2006, p.662). All these extreme positions might not be true. Promoting a movement as environmentalism may create false collective identities and mask inequalities among residents through greenwashing. Thus, forcing actions into the box of environmentalism falsely projecting them as an ideal version of 'ecosystem people' hides the unpleasant power relations between grassroots communities.

These linear pitfalls can be avoided when looked at through the framework of political ecology which considers multiple historic and geographic factors through the waterscapes discussed above. It is recognised that people in the floodplains of Delhi suffer for drinking water and from floodwater, for irrigation water and from polluted water, for livelihood opportunities and from evictions. Due to this, people go through a wide range of physical and emotional experiences regarding the environment (Sultana 2017, p.638). Baviskar (2005, p.174) states that various people attach various meanings to struggles. A multiplicity of spaces means that various actors understand, claim, invent, and use space differently (Zimmer 2017). Complex meanings are attached to everyday struggles. This makes any struggle a hybrid of various meanings and demands (Baviskar 2005, p.174). A movement is not defined once and for all, rather it keeps on evolving. This provides an opportunity not only to highlight injustice but also to acknowledge, recognize, engage, and learn along the way.

The accusations of being blind to these nuances frame environmentalism of the dispossessed of having utopic elements of a harmonic, conflict-free socio-natural landscape. However, it cannot be labelled utopic when it is firmly grounded, situated, and tied to specific spatial and temporal contexts (Guha and Martínez-Alier 1997). Moreover, despite being situated, the research echoes similar socio-environmental complaints faced by actors globally caused by similar pollution, conservation, and unequal development, and leads to similar forms of mobilization. This links situated movements to global issues (Conca 2005; Bryant and Bailey 1997).

The dispossessed in the floodplains do not call for a material boycott. Instead, they act relatively (Linkenbach 2009, p.13). Their environmentalism does go beyond the interests of a rejuvenated river. However, this is considered vital, especially because economically weaker sections of society, despite other factors like cultural, emotional, spiritual, and so on, might not have the privilege of taking a stand based on non-economic concerns. In a space where water is commodified, the agency of the marginalised to make choices based on other values remains constrained.

Keeping these aspects in mind, the actors that practice the environmentalism of the dispossessed are considered diverse, not fitting into neat categories of ‘indigenous farmers’ or ‘spiritual beings’. This dominant image of the dispossessed as ‘ecosystem people’ places

them on an unrealistically high pedestal. Instead, their views are not considered homogenous.

However, taking a cautious approach does not demean the environmentalisms of the dispossessed. It is important to acknowledge location-specific environmental resistance that is silenced heavily within various official institutions. Coolsaet (2016) recognises this as 'knowledge-based misrecognition,' and this concept has been discussed in the next section through the concept of politics of knowledge. Here concepts of rigour, rationality, effectiveness, and efficiency erase other relations to nature. Environmentalism of the dispossessed is able to deal with this very phenomenon by moving the dispossessed from the realm of polluters to the realm of environmentally conscious.

## 2.7 Politics of Knowledge concept in environmentalism

Socio-spatial processes are constituted through power and meaning (Heynen et al. 2006). Meaning is constructed by political struggles and social arrangements (Hennessy 1993, p.43). Thus, spatial meanings are formed by various environmental knowledges underlining various epistemologies. This implies that the ontology of spatial meanings is not predetermined. Therefore, science is a social and cultural space of negotiation and struggle (Robbins 2003, p.238). Lefebvre (1991) describes this as a collusion between knowledge and power. Therefore, knowledge and discourse are closely related to power and are motivated by political missions (Escobar 1996).

Environmentalism of the dispossessed considers the residents as knowledge bearers instead of passive subjects. It challenges normativity where institutional experts take the dominant position and become in charge of knowledge, leaving no space for dialogue and exchange, relegating others to passive receivers of knowledge. This is seen in the creation of the bio-diversity parks within the rejuvenated Yamuna initiative. Environmentalism of the dispossessed recognises that while limited knowledges dominate the popular discourse, various other types of knowledges are at play. Biodiversity then is not confined to a limited understanding of knowledge but is understood as a historically produced discourse (Escobar 1998, p.54).

Various people occupy the same space but use and understand it differently (Zimmer 2017, p.594). At a situated level, residents can intrinsically care about their surroundings and

hence find creative ways of practically working with the environment for survival. Diverse ways of thinking still exist (Norgaard 1994, p.52). This is supported by epidemiologies such as 'street science' and 'post-normal science' stating that 'lay' knowledge is no less than formal knowledge (Martinez-Alier et al. 2016, p.742). However, this is being disenfranchised and disqualified in conservation projects such as the rejuvenated Yamuna initiative.

Knowledge underpinned by values and interests varies remarkably across social groups. Knowledge is shaped by culturally coded ideas embedded in power and authority, informed by situated stakeholder relations, interests, and politics. It encompasses multiple claims, identities, relations, choices, values, and emotions (Turnhout 2018; Sultana 2017). It is locally situated, contextualised, and constantly negotiated (Wijsman and Berb´es-Blazquez 2022, p.383). This redefines/reinforces power, producing unjust geographies.

To understand how the politics of knowledges interact and produce waterscapes, this section first establishes the existence of multiple knowledges. It then analyses why certain knowledges are legitimised and how they produce conservation spaces such as the bio-diversity parks in an exclusionary way. In the end, the knowledges being erased within the rejuvenated Yamuna initiative will be highlighted.

### 2.7.1 Multiplicity of knowledges

All knowledges are cultural, social, and political. Therefore, they need to be viewed against their history, materialism, and power dynamics of exclusion. All forms of knowledge production, epistemology, theory formation, empirical analysis as well as practical application are always simultaneously and interactively social, cultural, historical, and spatial (Soja 2010; Rouse 1992). As a result, sharp distinctions between the North/South, indigenous/foreign, and traditional/modern are eliminated. Thus, the politics of knowledge does not merely look at 'local' knowledges challenging 'positivist' knowledges, rather it involves analysing conflict within all structures. Often, the distinctions are not epistemological (Robbins 2019). Boundaries between them are porous.

Recognising the multiplicity of knowledges makes the process of defining the problem and causes more flexible allowing the incorporation of multiple solutions. A holistic response will need the inclusion of socio-economic, political, cultural, and environmental aspects.

Considering all types of knowledge allows the exploration of multiple frames and the evaluation of both dominant and nondominant actions. This reduces failure, vulnerability, and resilience, producing a space for the incorporation of political and historic responsibilities. Wijsman and Berb´es-Blazquez (2022) refer to this as 'ecologies of knowledges' where knowledge systems enter dialogue with one another and are represented and included.

This shift can be achieved through a move from top-down to place-based approaches involving regional actors (Beck 2011, p.305). Multiplicity can help sustain biological and cultural diversity (Norgaard 1994, p.52). However, the current conservation policy in Delhi accommodates a multiplicity of values for some people only. While leisure is made space for within conservation, livelihood and residence are not. Trade-offs are bound to happen due to the complexity of social and ecological systems. However, it is important to see the reasoning behind complex trade-offs and the structuring of social conflicts over interests and values (Martinez-Alier 2002; Rohan 2000). Negotiation among different actors necessitates recognition and engagement (Schlosberg 2013, p.45). There is a need for multiple, overlapping analyses, and extensive discussion between various experts. Chapter 4 unpacks the reasons behind the legitimization of some trade-offs and multiplicities within the rejuvenated Yamuna initiative, while others are violently erased. This discussion is extended in Chapter 6 where how multiple knowledge interact, their temporality and relativity and how a more equitable waterscape shaped by broadening the multiplicity of knowledges is envisioned by the farmers.

### 2.7.2 The Legitimisation of Certain Knowledges

Within the rejuvenated Yamuna initiative, however, this broad multiplicity of knowledges is violently suppressed to legitimise certain knowledges. A singular discourse is employed to restructure and enclose spaces for conservation, such as the bio-diversity parks (Zimmer 2017, p.587). Packaging this for tourism and economic growth within 'world-class' cities, it is presented as evidence of growth and improvement and spread through the global media. This singular lens ignores multiple interconnected factors (Nash 2008). Deliberate homogeneity created on the ground erases multidimensional narratives. By being blind to this multiplicity, projects inherently isolate and marginalise many forms of knowledge, environmental imaginaries, and nature-society relationships. Political ecology exposes this

everyday knowledge that is framed as superior and relevant within such projects to shape both society and the environment.

This framing legitimises certain ontologies that shape most environmental actions by the state, judiciary, environmentalists, and the upper-middle-class *Dilliwale*. This framing is devoid of any socio-political and economic dimension of the problem and unequally empowers a linear vision of environmental knowledge and nature prescribing epistemological normativity (Negi 2011; Mol 2003). This discourse others and villainises, redefining the waterscape. As a result, a successful strategy to curb complex river pollution cannot be formed without including socio-ecological factors.

Whose knowledge is recognised, considered worthy, circulated, transformed, and transmitted is a political matter of everyday negotiations and discussions (Gururani 2002). Specific knowledge produces selective environmental representations of the privileged actors. Thus, the power to define and categorise the environment and in turn reordering the relationships between humans' environment and society rests with some (Turnhout 2018). This is defined by Mol (2003) as ontological politics. Here ontological limits are established creating boundaries of meaning, and categories (Hunt 2014).

Conserved spaces such as bio-diversity parks are created through a linear model of 'objective', 'impartial' and 'detached' science-society relations in environmental governance (Turnhout 2018, p.366). It follows a monolithic, centralized, and hierarchical epistemic model of expertise. Knowledge and the power to be seen and heard are centralized. The Truth here is projected to be constituted independently of historic socio-political power relations and embedded in wider political discourses and practice (Robbins 2019). This is done by framing environmental solutions as technical rather than social. The term 'science-based evidence' adds an apparently moralistic edge to the discourse (Peet 2011, p.24). Technocratic solutions are considered "rational and value-free scientific and managerial techniques by a professional upper-middle-class, who regard the environment as neutral stuff from which humans can properly shape their destinies" (O'Riordan 1981). However, science is a social and cultural space of negotiation and struggle (Robbins 2003, p.238). These policies and plans fail to recognise the historic socio-political power relations (Robbins 2019). This perspective asserts that nature belongs to humans and can be controlled in any desired manner (Boer 1984, p.246).

Rejuvenation attempts by creating biodiversity parks without attacking the symptoms rather than the causes of pollution. Hence, they are partial, temporary, incomplete, and insufficient solutions as they do not eliminate the continued production of the problems (Lake 1996, p.169). Biodiversity has thus become a crisis to be solved by a singular understanding of threats and solutions. Here the problem is framed to be tame with a straightforward, hierarchical, and external to the social situation (Zhouri 2017, p.449). It is devoid of any socio-political and economic dimensions. This closes a broad range of problems, causes and solutions to a single problem, cause, and solution. It does not address the larger socio-ecological problem. This shifts the discourse from systemic causes of the crisis to limited solutions. Therefore, the complex nature of environmental issues defined in a singular and absolute way enables them to be linked to the knowledge power constellations creating concrete top-down strategies (Escobar 1998).

On the other hand, multiple knowledges and theories are accused by institutional environmental experts to have only local applicability. This not only aims to detach expertise from political and cultural contexts but also from a situated understanding and experience (Jasanoff 2010). This successfully masks the vast political implications, winners and losers, and violations of rights. Lefebvre (1991) describes this as an 'inoperative system of knowledge'.

Disenfranchisement and disqualification occur because knowledge legitimised as superior serves vested interests (Heiman 1996, p.119). This norm is intentional to reproduce the power dynamics. These knowledges allow the decision-makers to act in an overtly political manner by privileging some and targeting others while simultaneously claiming to 'keep politics out' of environmentalism. This has enabled decision-makers to escape accountability. The environmental governance debate is deliberately confined to these frameworks to erase inequitable social and ecological measures.

Therefore, environmental actions cannot take a seemingly apolitical route. A singular understanding of science fails to provide a sustainable solution when multiple factors are not considered. This framework needs expansion in terms of what is considered the environment, valid knowledge, and how nature is imagined. There is a need for moving ahead of singular solutions toward a broader restructuring of governance frameworks.

Unpacking this leads to greater nuance in understanding environmentalism and the struggles relating to it.

### 2.7.3 Knowledges being erased

Agarwal and Narain (1999) expressed concern about knowledge-generating systems like universities and research institutes neglecting multiple knowledge systems. Thus, an integral approach must include multiple knowledges. This is now recognised as crucial for developing environmental solutions worldwide. As discussed in Chapter 1, the development of bio-diversity parks is one such example that moves away from technocratic solutions such as Sewage Treatment Plants (STPs) under the Yamuna Action Plans to blue-green infrastructure such as creating and maintaining ponds and trees. Chapter 6 expands on how it is being learned in a situated manner through trial and error. However, this shift from a singular techno-centric solution to a more situated and inclusive solution still limits itself to the multiplicity of upper-middle-class demands and de-legitimises various knowledges, imaginaries, and values. Thus, while space is being made for the multiplicity of knowledges in projects, it is being done in a way that is further alienating the marginalised from the issue. Here the multiple knowledges are recreated within the dominant conservation rhetoric facilitating displacement and dispossession (Escobar 1998, p.61). Therefore, just creating space for multiple knowledges do not necessarily signify engagement with the marginalised stakeholders. The need rather is to drive a fundamental restructuring of schemes (Oudenhoven and Haider 2012, p.14). Rather than being included in the pre-existing frameworks of knowledge systems, there is a need to reflect on the conceptualisation of nature-society relations and the organisation of knowledge, moving towards deeper transformative change.

Knowledges held by the farmers recognised as generational, communal, and situated are some of these de-legitimised knowledges. Here it is important to note that all knowledges, including these, must be understood as partial (Turnhout 2018). The situated small-scale agricultural practices in Delhi are context and time-specific rather than an absolute 'indigenous knowledge system' (Richard 1993). Thus, they are heterogeneous, dynamic, and formed of various voices and worldviews. They are unique, existing within and developed around specific conditions in a particular geography. Therefore, knowledge-making is through experimental learning and is not fixed or static (Corburn 2005, p.48). Much like

other knowledges it expands, deepens, and interacts in a relational way with historic moments and is continuously constructed.

It is important to explicitly recognise them as 'scientific' as they have evolved from experimentation and trial and error (Robbins 2003, p.238). A part of knowledge is derived from experience. Ingold (1996) describes knowledge as a process of skilling oneself through practical engagement with the environment. Lived experiences are not separate and function within the politics, geography, and social structures of the external world. Everyday struggles, changes and organising are filled with emotionality (Sultana 2017). They are how people engage in and with the world. While this is spatially limited, it ontologically connects globally. Thus, they are crucial for understanding the bio-physical characteristics of the land (Zurayk et al. 2000, p.260). This legitimizes the ways of being and knowing followed by the farmers. Thus, making them relevant and crucial for environmental protection.

Furthermore, Agarwal and Narain (1999) claim that these knowledges primarily develop through sustainable ecosystem use. The soundness of their concepts is demonstrated by their generational use and application sustaining the survival of both them and the ecosystem (Grenier 1998).

## 2.8 Conclusion

To examine the political ecology of the transforming Yamuna waterscapes, this chapter lays out the theoretical framework that will be used to answer the three research questions. Dialogue between the two environmental theories, bourgeois environmentalism and environmentalism of the dispossessed analysed through the political ecology framework unravel the nuanced, power-laden, multi-level and complex relationships between conservation, knowledge, and everyday politics in the Yamuna waterscape.

This chapter first conceptualises the political ecology of waterscapes and centres on the analysis of power dynamics within it. Waterscape through political ecology highlights inequitable outcomes of environmental actions applied in an apolitical manner. Baviskar (2020, 2019), Bhan (2016, 2009) and Follmann (2016, 2015, 2014) establish that Indian cities largely and Delhi specifically are characterised by highly uneven political ecologies. I take this analysis forward and by politicising the rejuvenated Yamuna initiative shift it from its

current technical focus within the state and the judiciary to the focus on environmental governance.

Next, this overlapping, fragmented and complex system is theorised by breaking the binaries between bourgeois environmentalism and environmentalism of the dispossessed. Bourgeois environmentalism is partly useful in analysing the dichotomy between the eviction of small-scale farmers for the creation of bio-diversity parks under the rejuvenated Yamuna initiative. Although labelled as 'green,' urban changes that are ecologically degrading, rooted in violence, are implemented for aesthetic and security purposes (Baviskar 2020).

However, while this theory is able to explain the creation of an aesthetic, leisure space for the upper class, it fails to capture the play of multiple knowledges and diverse resistance by varying actors. Thus, while still causing displacement and dispossession, the current rejuvenated Yamuna initiative does go beyond bourgeois environmentalism. It accommodates a multiplicity of knowledges within its design. However, this incorporation still stays limited to the demands of the elite. This theoretical gap is filled by environmentalism of the dispossessed theory, which recognises this as ‘knowledge-based misrecognition’ (Coolsaet 2016). Moreover, it showcases that the ecological and social justice fight is one and the same (Guha and Martinez-Alier 1997).

The three points highlighted here that shape the forthcoming empirical chapters based on the research questions are the power dynamics within the Yamuna waterscape (Chapter 5), multiple knowledges at play (Chapter 6) and competing resistance (Chapter 7).

# Chapter 3 Methodological Approach

## 3.1 Introduction

Power dynamics, influenced by cultural aspects, meanings, knowledge, and imaginaries, shape waterscapes and gain significance when examined through the political ecology framework. It defines the various environmentalisms at play. A situated examination of these various aspects enables an analysis of the structural and embedded ways in which marginalisation and dispossession take place. Everyday practices and interactions take the form of spatiality. This chapter discusses the research methodology employed in answering the three research questions dealing with power dynamics, environmental knowledges and claims in the Yamuna floodplains of Delhi through ethnography.

This chapter first tackles the epistemological and ontological positions that underpinned the research. My professional and personal journey as a *Dilliwali* introducing me to the research topic, defining my access to the research site (Chilla *Khadar*) and influencing my changing positionalities and subjectivities throughout are discussed next. Then the importance of Chilla *Khadar* as central to understanding the historical, political, ecological, and cultural dynamics of various environmentalisms is established. This is followed by laying down ethical challenges dealing with the tensions between anthropological methodologies while adhering to standardized institutional ethical norms and approvals. Finally, I discuss how my ethnographic plan was disrupted by various restrictions stemming from the COVID-19 pandemic, presenting both opportunities and challenges.

## 3.2 Ethnography and political ecology

### 3.2.1 Ontology and epistemology

One of the central themes of this thesis is to capture how complex, relational, competing, and multi-layered power operates in knowledge formation and resistance. These shape the interactions within and between different socio-ecological groups, ascertain whose and what knowledge is legitimised and how people resist and make space for themselves in the transforming waterscape. As discussed in the previous chapter, all forms of knowledge production, including this research, are epistemologically, theoretically, empirically, and practically social, temporal, and spatial. These interwoven aspects are identified as “triple

dialectic" by Soja (2010). Considering these interrelated complexities of power, knowledge, and resistance, I make use of Demeritt's (1998) 'artifactual constructivism' which without denying the ontological existence of nature points out that the 'reality' depends on a configuration of social practices. Here the focus becomes the production and articulation of the reality of nature through powerful practices. Thus, knowledge is understood to be a product of manipulation (Mol 2003, p.5).

Political ecology framework presents an opportunity to engage with the ontology of diversity, politics of difference, cultural re-appropriation of nature, dialogue of knowledges and processes of resistance (Leff 2017, p.44). Ontologies are brought into being, sustained, or erased, and allowed to disappear (Mol 2003, p.6). Biophysical realities exist. However, the representation of these realities needs to be questioned concerning the cultural contexts of their production, and their historical and political implications (Doolittle 1998, p.518). Therefore, enabling conditions of how constructions of nature occur within intersectional relations of class, caste, gender, and ethnicity need to be taken seriously (Castree and Braun 1998, p.18). These intersectionalities will be elaborated on in Chapter 5. As a result, a single ontological position would displace other possibilities and thus become fundamentally violent.

Escobar (2010) describes the introduction of the theoretical position of constructivism in political ecology as its second phase. It assumes the existence of multiple, socially constructed realities (Hajer and Versteeg 2005, p.176). Thus, attempts are made to unpack unequal power relations within social groups and knowledges that define human-nature interactions on all scales (Baghel and Nüsser 2010, p.233). It therefore focuses on social power and legitimacy. Knowledge is constructed as embedded in the situated socio-ecological context. This links to nature, society, and the self (Krasny et al. 2013, p.641).

However, constructionist approaches have been criticised for reducing the world to our knowledge of it (Proctor 1998). Instead, artifactual constructivism understands that knowledge is constructed relationally. While the floodplains, the river, and the vegetation do exist physically in Delhi, how they are understood and construed by various people is constructed. Through artifactual constructivism, while the material world is understood to exist separate from knowledge, mediations and interactions between humans and non-humans are visible (Demeritt 1998). This extends the 'social' in social constructions to

include non-human actors. This approach allows the interrogation of how socio-ecological interactions embedded with power marginalize both nature and society and how they resist this in culturally specific ways (Demeritt 1998). By understanding the 'heterogeneous construction of nature' through political ecology, one can study the multiplicity of knowledges and ways of being (Neumann 2005).

In other words, 'artifactual constructivism' accepts the ontological existence of the world but recognises that the 'reality' depends on the configuration of social practices within which it manifests (Braun and Castree 1998, p.169). A combination of materialist/idealist and realist/constructivist epistemologies builds theoretical foundations for practical application. As stated by Latour (2004) discoveries made by both militant ecology and political epistemology need to be added together without falling into the representations that humans make of it.

Resistance to this 'reality' that is creating socio-ecological degradation follows a hybrid path comprising physical, organic, symbolic techno-economic, cultural, and political (Leff 2017, p.51). Epistemologically and ontologically, there is a need to build bridges between various forms of knowing and ways of being embedded in the multiplicity of practice (Escobar 2008). जुगाड़ (a resourceful approach to problem-solving. This might be informal/illegal) needs to be appreciated[12] alongside rigorous institutional scientific methods (Kothari and Joy 2017). Learning then becomes a social activity or 'participatory reciprocity' (Sundberg 2014, p.40).

However, As mentioned in Chapter 2, the accumulation of knowledge about the actual unfolding or performing of contingencies is largely influenced by ontological assumptions. Therefore, we are both enmeshed in shaping the spaces around us while evolving spaces shape our lives. In other words, we are both embedded in ecological and social contexts making our individual biographies and collective histories (Soja 2010). Not only do the 'political' influence trajectories of socio-ecological change but the 'physical' and 'biological' also matter politically (Swyngedouw 2023, p.131).

[12] Here the call is to not romanticise piecemeal resourcefulness due to institutional failures. However, this widespread approach needs to be recognised and acknowledged to be practised by almost all sections of the society.

The 'real' is, therefore, relational, and not dictated by structure and laws (Escobar 2008, p.11). The ontological principles of diversity, difference and otherness are firmly based on location-specific socio-natural practices (Leff 2017, p.51). This constructs sustainability discourses and practices rooted in specific cultural territories defying universalisation of epistemology (Sundberg 2014, p.36).

However, while being situated, the need to engage with global knowledges and broader trends is recognised (Leff 2017). 'Multiepistemic literacy' imagines the performative enactment of multiple, distinct ontologies (Sundberg 2014). They sustain themselves inclusively even as they interact, interfere, and mingle (Swyngedouw 2023, p.131). This makes room for imagining the performative enactment of multiple, distinct ontologies co-creating knowledges and worlds (Sundberg 2014). There is space for a multiplicity of narratives creating a complex, contradictory, differentiated, and disjoint power relation. Therefore, Blaser (2014) describes this as a 'problem space' that includes disagreement on the definition of nature itself (de la Cadena 2010, p.347). Kothari and Joy (2017, p.638) call this "a sort of eclectic unity in diversity". This understanding facilitates the cultivation of long-term relationships that respect differences (Chen et al. 2013, p.8). Chapter 6 not only analyses this 'multiepistemic literacy' present in the Yamuna floodplains but also elaborates how the environmental imaginary of the farmers makes space for it more inclusively.

This epistemological recognition has implications for how we envision just responses to global ecological change (Davis et al. 2019, p.4). Political ecology then focuses not on the 'reality' but on reality making. Latour (2004) calls to move towards the multiplicity of nature. This otherness also becomes resistance and contestation to the unitary ontology of being and epistemologies that inform the current hegemonic world order. Thus, rights for cultural diversity are established and enforced calling for eco-cultural co-evolution (Leff 2017).

Thus, the research questions guide the more relativist perspective with qualitatively derived data to enable situated understanding. Non-positivist epistemology is deeply built on meaning and history (Rose 2005, p.93). Ethnography then becomes an important tool for understanding crucial aspects of the continuous reproduction of urban ecologies (Zimmer 2017, p.596).

### 3.2.2 Ethnography

Ethnography, within the political ecology framework, plays a crucial epistemological role in understanding the (re)production of urban socio-ecologies and socio-economic relations (Fairhead et al. 2012, p.242). It enables an understanding through the political, cultural, historical, geographical, and social lens (Moore 2008). Thus, both historical and contemporary data bound up with wider social, economic, ecological, and political processes can be collected (Khalil 2019, p.4). All three research questions have been addressed using both historical and contemporary data in chapters 5, 6 and 7. This approach allows for the understanding of the production of urban space, as well as the explanation of differences and inequalities in the socio-environment (Zimmer 2017).

Qualitative approaches emphasize nuanced and detailed analysis of interviews, texts, and observations to understand processes and meanings (Sprague 2016, p.145). During the fieldwork, time is spent in places where people live, work, play and so on. This gives an idea of the group's way of life, practices, and meanings formed. This is supplemented with historical records (Sprague 2016, p.145). Therefore, the combination of multiple qualitative methods is employed to learn about practices and beliefs.

The study site is seen as a space of connection between politics, culture, and power. This makes space contested with multiple meanings (Moore 2008). Critical ethnography becomes the best tool to represent complex and contentious social processes without romanticising them (Kapoor 2016, p.581). It deals with processes of situated unfairness and injustice by recognising the assumptions about social difference (Gjelstad 2016, p.159). In other words, critical ethnography allows for documenting the daily struggles of competing powers, voices, and interests, which is core to analysing the political ecology of environmentalism in the Yamuna floodplains in Delhi.

Ethnographical data comprises of 'rich and thick description' of cultural and political phenomena with empirical observations, contextual information, and interpretive analysis to form an explanatory narrative (Breslow 2014; Geertz 1973). In other words, it seeks a detailed analysis of processes and meanings (Sprague 2016, p.145). This provides a unitary representation of nature and society, offering a deep analysis of environmental conflicts (Tassan 2009, p.7). Situated political ecology demands a nuanced, richly textured empirical

analysis (Peet and Watts 2004, p.38). This becomes especially important while working with marginalised groups (Bryant 2017, pp.8-9).

Following the political ecology framework, ethnography at a local level encompasses multidisciplinary fields of anthropology, geography, sociology, politics, and environmental studies (Núñez 2017, p.460). A wider picture is built by combining multiple methods such as newspaper analysis, plans, reports, detailed research notes, and open-ended conversations, along with the use of semi-structured interviews. Therefore, the flexibility of methodology and techniques guides the research (Núñez 2017, p.472).

Triangulating various methods demonstrates a more robust and comprehensive analysis. Triangulation refers to making claims by consolidating data generated by multiple methods and collected from diverse perspectives (Doolittle 1998, p.519). This enables cross-referencing thus verifying data (Harrison 2006, p.65). This sheds light on various dimensions of a phenomenon such as its embedded historical socio-political background (Wodak 2023, p.529). This enables a more detailed, rich, and rounded understanding of the complex socio-ecological system (Doolittle 1998, p.519) and the 'realities' of the research area.

Ethnography maintains a delicate balance between local insider and outsider perspectives (Núñez 2017, p.460). Therefore, knowledge is co-produced between the researcher and participant, countering single narratives (de Nooijer 2021, p.3). Close attention was paid to how people identified themselves. This clarified feelings and perceptions about entangled issues of politics, economics, and ecologies (Núñez 2017, p.470). Núñez (2017) states that through ethnography one, people are 'rendered human' as competent and moral social actors. Two, viewing lived experiences concerning larger political-economic constraints helps to understand various choices, providing multiple perspectives to socially prevalent narratives about the farmers.

## 3.3 Why ethnography in Chilla *Khadar*?

One's social, cultural, political, and similar positions dictate the questions being asked, their framing and the theories being used (Gregory et al. 2009, p.556). I was born and brought up in South Delhi where I lived for 18 years. Due to the city's structure and planning, I perceived the river as non-existent during this period. The larger socio-ecological historical effects of this city planning will be elaborated on in the next chapter. As my parents were

civil servants, upon their retirement in 2013, we had to leave the government housing in South Delhi and move to Mayur Vihar (East Delhi). The Yamuna cuts Delhi in two parts. Now suddenly I found myself on the other side commonly identified as '*Jamna-paar*' (beyond the Yamuna River). This side of Delhi is considered 'bad' by *Dilliwale*. For context, a popular Amazon Prime show[13] describes South Delhi as '*Swarg-lok*' (Heaven) and '*Jamna-paar*' as '*Pataal Lok*' (Hell). Mayur Vihar was formerly part of the Yamuna floodplains and rich in agriculture. However, the land was raised by the government and taken over to build upper-middle-class housing co-op societies (gated housing)[14] which have now mushroomed in the area. Moving to Mayur Vihar put me physically close to the river (less than 2 km). However, I remained unaware of the river's existence.

That year I joined Maharaja Agrasen College, Delhi University as an English (Hons) student. Taking advantage of my newfound freedom as a college student with a driving licence and a new scooty, I along with my group of friends started exploring the area, bunking classes. As stated in Chapter 1, the Yamuna floodplains became a regular place to visit. Despite the polluted river, the sight of water and the open area was still mesmerising compared to the concrete city. I first visited as a tourist and then as a volunteer in local NGOs teaching primary students and conducting cleanliness drives on the floodplains.

[13] *Paatal Lok*, Amazon Prime (2020)

[14] In the late 1980s, with the newly institutionalised economic liberalisation, the Delhi Development Authority lost its land monopoly. Urban professionals constructed their own apartment complexes, in East and North-West Delhi. Gated colonies enlarged the socio-spatial divide under neoliberal policies. The divide here is not based on just class but on other social traits discussed in Chapter 1.

Figure 8. Visits during 2013-2015 to the Yamuna River with my friends, image by Isha Bhatia.

However, being from an upper-middle-class background, these visits only sensitised me to the environmental aspects of the river. I very much followed the 'bourgeoisie environmentalism' trope of enclosed conservation and converting the floodplains into parks and leisure spaces as discussed in chapter 2. In other words, my demands had no space for the farmers in the floodplains, much like the current city plans and judicial judgments regarding the rejuvenated Yamuna initiative. This will be elaborated on in chapter 4. To grasp the 'socio' in the socio-ecological, I needed to move away from the river's proximity. I travelled 10,436 km to the University of New South Wales, where I pursued my master's in International Relations in 2017. For my master's thesis, I chose to explore the pollution in the river due to my past experiences titled 'Rethinking River Governance in the Global South: Analysis of the Clean Yamuna initiative in Delhi, India' (2018). This is when I was introduced to the framework of political ecology opening my purview to the socio-ecological aspects of the initiative evolving the siloed ecological aspects.

In 2020, when I started this PhD, my focus was on river pollution without floodplains. The expanded understanding of the river system to also including the floodplains as explained in Chapter 1, was formed through the various phases of the fieldwork, webinars, reflection and write-up. This process slowly shifted my focus to environmentalisms in the floodplains, specifically in the research site Chilla *Khadar* and surrounding areas as stated in Chapter 1.

This field[15] represented the unequal power relations influenced by complex, intertwined, and overlapping nexus of order, illegality, surveillance, and modernity dictating the environmentalism of various actors within the prototype of the rejuvenated Yamuna initiative. While these aspects can be found throughout the Yamuna floodplains in Delhi, four things made Chilla *Khadar* unique. One, is cultural aspects due to the presence of घाट in the area for conducting rituals and its intimacy to political aspects due to the eviction of farmers after the organisation of the 'Cultural Festival' by the group 'Art of Living' in 2016. Two, its geographical closeness to the experimental rejuvenated Yamuna initiative's South Delhi Biodiversity Park, to be copied throughout Delhi and India. Three, the fishing practices, are unique to the area. Four, my own physical proximity to the region provides me daily access to the area even during the pandemic full of travel restrictions.

Due to the reasons mentioned above, Chilla Khadar became my primary research site, though initially, I had three sites in mind. However, due to the lockdown, it was clear that I would not be able to visit the other 2 sites regularly to do justice to ethnography research. Initial visits to Chilla Khadar unveiled aspects of the area previously unknown to me, solidifying my decision to focus my research there. The literature review just identified the agricultural aspect of Chilla Khadar. However, my visits revealed the area to be rich in fishing activities, and cultural activities and being adjacent to the prototype of bio-diversity parks applied in Delhi (South Delhi Biodiversity Park). Therefore, these findings related to the ecological transformation of the area along with the power dynamics ingrained within the fishing occupation and cultural aspects form the empirical contributions of the thesis. Figure 9 marks these areas.

[15] Rocheleau (2015) describes the 'field' as someone else's home, habitat workplace and world.

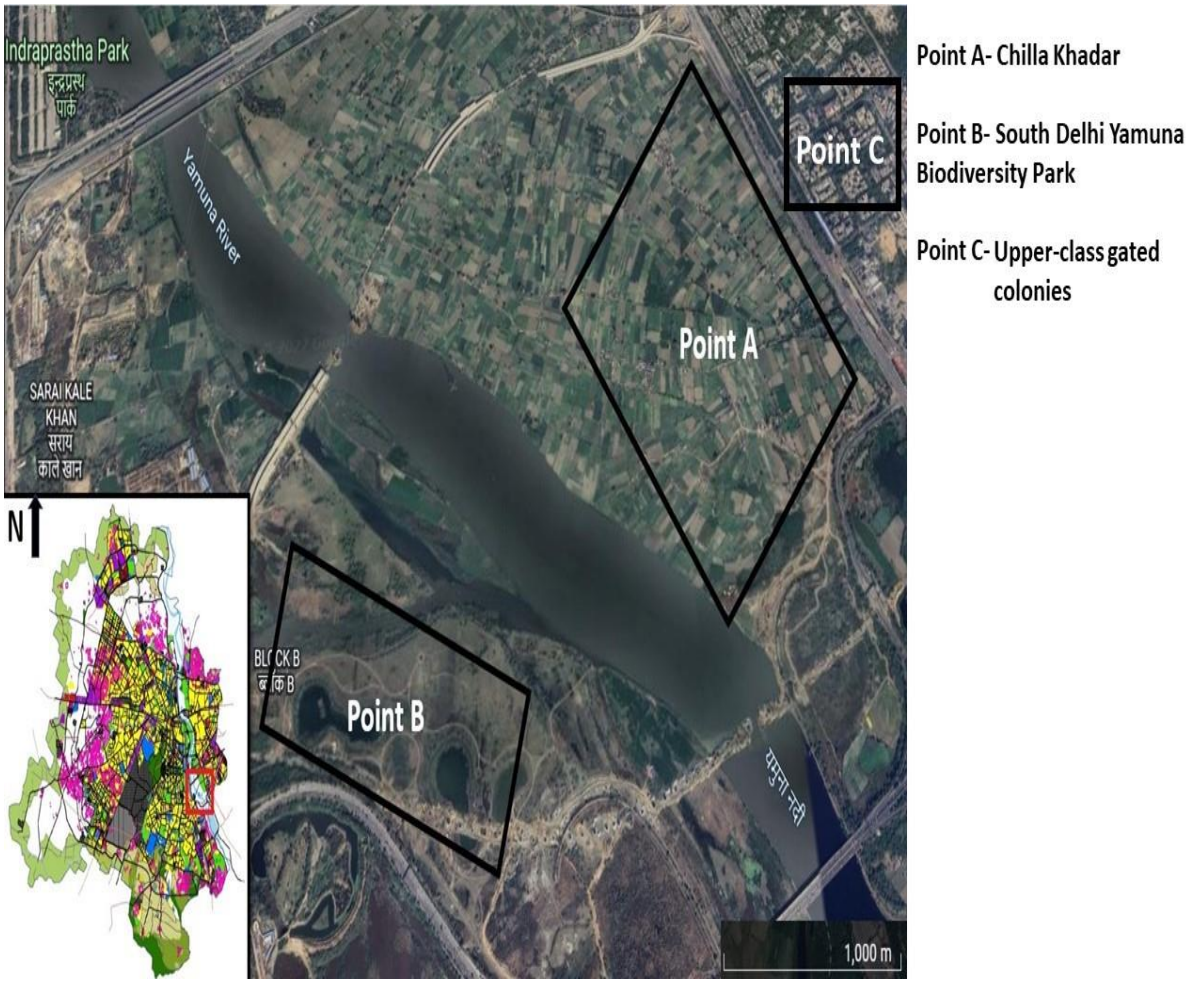


Figure 9. The research site map, created by Shivani Singhal.

### 3.3.1 Environmental governance in Chilla *Khadar*

The governance around the Yamuna (surface and groundwater) is multilayered and polycentric. State-level and national-level government agencies; state-level, national level, and specialised judicial system; NGOs, environmental and civil; religious institutions; small-scale industries; intersectional communities along the river; residents of Delhi; and private actors such as Akshardham Temple are all involved. To make things even more complicated, some of the Eastern Bank of the river, where Chilla Khadar lies, is under the state of Uttar Pradesh. Each stakeholder has its own system of governance, practices, and norms that pertain to the river.

Figure 10 maps them inside the circle. These categories have not been considered watertight. For example, a farmer from the *pandit* (priest) community can also be recognised as a cultural leader and a housing rights activist due to his involvement in legal

petitions. In the same way, a mainstream environmentalist can also be an upper-middle-class *Dilliwala* and a cultural leader due to his use of cultural and religious symbols referring to the river as 'Yamuna *Mata*' (Mother Yamuna).

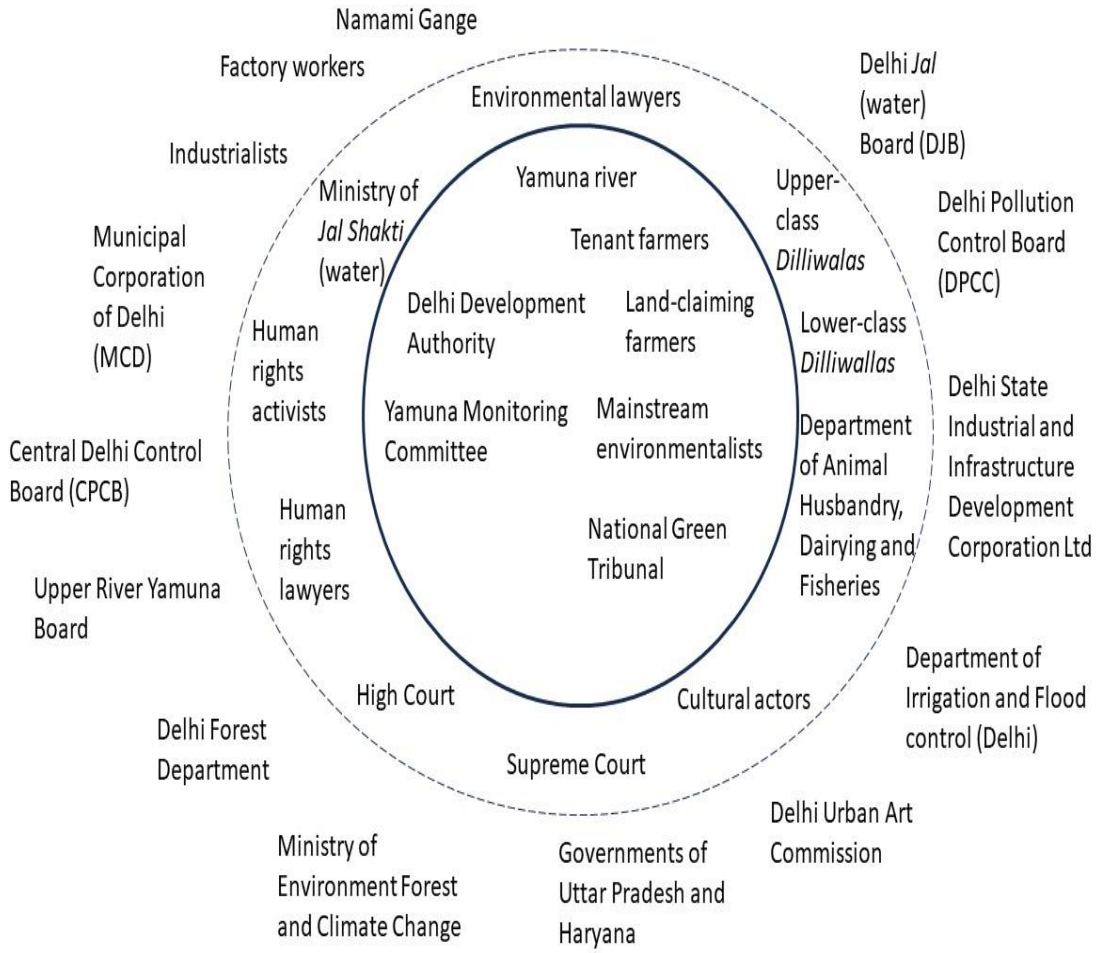


Figure 10. Actors involved in the governance of Chilla *Khadar*, Created by Shivani Singhal.

Intersectionality of class, ethnicity, and gender can be seen among these farmers situating them on various power axes simultaneously. For ease of discussion, two kinds of farmers can be categorised in Chilla *Khadar*. The land-claiming farmers have been involved in the occupation in Delhi since living memory and now are relatively powerful and claim to own the Chilla Khadar land. On the other hand, tenant farmers migrated to the city around three decades ago and leased out the land from the land-claiming farmers. Socio-political and economically, they increasingly face violence due to the rejuvenation Yamuna plans.

The Yamuna River and its floodplains can also be recognised as important actors. Recapping from chapter 1, the river waters are highly polluted with heavy metals and the river has 0 dissolved oxygen (D/o) at multiple points making it lose its life-bearing capacity (Bhattacharya et al. 2015; Babu et al. 2013). The relationship of the river and the floodplains is dynamic and interconnected.

The state and the judiciary, as the two main decision-making actors, can be observed to follow aesthetic-based decision-making practices prevalent throughout India. Water is on the State list, and they have the power to enact water-related legislation related to water supply, irrigation and canals, drainage, embankments, and water storage. However, the Centre can also take responsibility for it, especially in transboundary water sources (Schiff 2018, p.412). Moreover, its ownership and usage rights are guided by multiple property regimes such as individual property, common property, and state property. The central agencies get involved through judicial mandates and nationwide programmes such as Namami Gange.

There is a fierce political rivalry between the government in Delhi (*Aam Admi Party* (AAP) (Common Man's Party) and the central government (*Bharatiya Janta* Party (BJP) (Indian People's Party). AAP has been in power in the state since 2015. They speak the language of urban citizenship that is markedly different from the judicial and central state narratives (Bhan 2016) and the previous pro-market planning (Bose 2018; Burakowski & Iwanek 2017) making it unique in the Indian context (Lama-Rewal 2019, p,182). They have banned evictions showing a tremendous shift in the public discourse and politics of the city. However, this remains symbolic since most of the National Capital Territory (NCT) falls under the jurisdiction of the DDA, which is a central, not a state, body (Bhan 2016, p.254).

On the other hand, the BJP is the political wing of the Hindu Nationalist movement established in 1951. It is recognised as a populist party with varying political identities ranging from neo-liberal to religious fundamentalist (Tepe et al. 2022, p.89). One of the first large-scale demolitions of Yamuna Pushta, a settlement of daily wage workers, on the banks of the river in Delhi was held under the BJP government in 2004. How this event changed the parameters of environmental governance in Delhi and its explicit focus on targeting Muslim residents has been discussed in chapter 4. More recently, the BJP has been involved in water governance in Delhi through Namami Gange, one of its flagship programmes

launched in 2014. This has brought river pollution at the centre of the political debate. However, the focus has remained not on an environmental crisis but on the holy sites of Ganga (Tepe et al. 2022, p.105). Its tributary, the Yamuna does not find much space within this rhetoric. Blair (2023) argues that while many elements in Hindutva support environmentalism, the BJP's priority unmistakably has been economic growth rather than environmental rejuvenation.

Within the central government, authorities engaged in water pollution prevention are the DDA, CPCB, MoEFCC (Ministry of Environment, Forests, and Climate Change), and Namami Gange. Among these the Delhi Development Authority (DDA) which has 53% of the Yamuna floodplains under it (DDA 2020) makes the Delhi Master Plan can be considered one of its most active. DDA is a body dedicated to planning and developing Delhi and was established in 1957 under the provisions of the Delhi Development Act "*to promote and secure the development of Delhi*". One of the main aims of this body recognised within its various Master Plans (MPD-2001 (DDA 1990); MPD-2021 (DDA 2007); DMPD-2041 (2021)) is to make Delhi a 'world class' city through bourgeois environmentalism as described in Chapter 1.

Apart from the DDA, the CPCB is the federal-level board responsible for setting effluent standards, testing, monitoring the water quality, ordering remedial measures, and coordinating activities among state pollution control boards and state governments (Schiff 2018; Wang et al. 2016). CPCB sits under the MoEFCC and oversees the administrative structure for the planning, promotion, and coordination of the implementation of India's environmental policies and programmes.

Within the state governance, the responsible agencies for the control of pollution are DJB, MCD, DPCC, Irrigation and Flood Department, and DSIDC (Delhi State Industrial and Infrastructure Development Corporation). The DJB is a specialised public utility agency that came to power in 1998. It manages domestic potable and raw water in Delhi. This also includes water quality control, water pollution monitoring, provision and maintenance of sewers and their connection to the STPs. It provides water to informal settlements, including the study area Chilla Khadar, through tanker supply.

The MCD was constituted in 1957 along with the DDA as an important governing body for the planning and upkeep of the city. Among other things, its main responsibilities are

providing basic sanitation services such as garbage collection, maintenance of rainwater drains, and provision of toilets. These drains are also used to discharge municipal as well as informal wastewater (Karpouzoglou and Zimmer 2012, p.62). It too is responsible for accommodating the needs of the middle class and evicting slums (Chaturvedi & Gidwani 2011, p.137). Moreover, organisations such as DPCC, Irrigation and Flood Department and DSIDC are also under the state government. Much like the central body CPCB, the DPCC is a state-level agency that monitors the water pollution in the river and the drains. It is also responsible for setting up STPs. The Irrigation and Flood Department is responsible for protecting the city against floods by monitoring floods, and building, and maintaining embarkments along the river and drains. It is also responsible for building stormwater drains and providing irrigation facilities to cultivators through state tube wells. DSIDC seeks to regulate industrial effluents into the river.

Apart from the state, another high-level decision taking actor is the judiciary. The judiciary can also be seen working in a bourgeoisie way. From the first decade of the 20$^{th}$ century, the Delhi High Court gave the most ruthless judgements to remove 'slum' settlements in the city for its 'cleanup' (Dupont 2011). Where these evicted people would go was not their concern. The Delhi High Court and the Supreme Court of India are not just arbiters of justice but also play a vital role as parallel administrative and executive bodies (Bhan 2009, p.134). While through the PIL, the Supreme Court was supposed to speak out for the 'underdog' the interests of the poor are seldom addressed here (Ahmad et al. 2013, p.650). Actions of violence, displacement and dispossession are argued to be in the public interest. They are termed as actions of good governance, urban development, and order (Bhan 2016, p.8). Moreover, they are meant to emend the failure of the political and administrative actions by the government on urban and especially environmental issues (Sharan 2016; Batra and Mehra 2008). This transition created a new space for environmental governance, especially through the specialised court of NGT.

Environmentalism was institutionalised within the logic of the law through the establishment of the National Green Tribunal (NGT) in 2010 under Article 21 (Right to Life) of the Constitution, which emphasises the right to a clean and healthy environment (Rengarajan et al. 2018; Gill 2014). Public Interest Litigations (PILs) and *suo moto* (their own accord) actions, enable the NGT to give judgements (Rengarajan et al. 2018). As stated in

Chapter 1, Public Interest Litigation (PIL) is a broad-based, people-oriented approach envisioned access to justice under Article 39A[a] of the Constitution of India. It refers to litigation for the common good and was set up in 1981 to protect the fundamental rights of citizens (Alley 2009, p.795).

Within the NGT, the Yamuna Monitoring Committee (YMC), set up by the MoEFCC, comprising institutional experts that provide recommendations for the 'Yamuna matter' can be recognised as one of the powerful bodies shaping the rejuvenated Yamuna initiative. To recap from chapter 1, various cases such as the Manoj Mishra v Union of India & Others (Application No. 6 of 2012), were taken up by the NGT, and it came to be known as 'the Yamuna matter' in popular discourse. To provide technical environmental expertise in the matter, the Yamuna Monitoring Committee was set up in 2018 and dissolved in 2020. The YMC commissioned various technical reports that have been used as auxiliary data in this thesis.

Another important actor present is the environmentalists. Mr Manoj Misra, who filled the PIL mentioned above that ignited the rejuvenated Yamuna initiative can be recognised as one such mainstream environmentalist. I use the term 'mainstream environmentalist' throughout the thesis when talking about environmental non-profit organisations run by the upper class. This term marks the actor's environmental recognition in the mainstream discourse. Through this, I aim to recognise the environmentalism of various other actors such as the farmers and move away from the singular institutional image of an environmentalist. Space is made for the recognition of other actors also being environmental such as the farmers as it becomes a reminder that while other actors do advocate for the environment, they are not recognised as environmentalists within the mainstream discourse.

Other actors such as environmental lawyers, human rights activists, and lawyers, lower-class *Dilliwale*, upper-middle-class *Dilliwale*, cultural actors, High Court, Supreme Court, Department of Animal Husbandry, Dairying and Fisheries and the Ministry of *Jal Shakti* (water) also play an important role in taking part in the governance of Chilla *Khadar*. However, these actors are recognised to work along with the above-mentioned actors partially and do not have direct involvement in the governance of Chilla *Khadar*. In the figure, they have been mentioned within the dotted lines.

Furthermore, even more actors such as the Upper River Yamuna Board, Delhi Forest Department, Delhi Urban Art Commission, Governments of Uttar Pradesh and Haryana, industrialists, and factory workers are involved in the governance of the Yamuna floodplains. However, to analyse the political ecology of the transformation due to the rejuvenated Yamuna initiate in Chilla *Khadar*, they are not relatively too relevant and therefore have not been included directly in the thesis. How this research focus came about has been explained next. In the figure, they have been mentioned outside the circles.

## 3.4 Data Collection

Initially, my fieldwork plan consisted of considering a wide variety of stakeholders mentioned above. Then, the research topic focused on river pollution without including the floodplains. This included domestic sewage, industrial sewage, agricultural pollution, and cultural waste. However, quickly I realised two things. One, it would be impossible to cover such a wide range of topics and do justice to their nuances via qualitative research in a single project. Two, due to the lockdowns during the pandemic, most small-scale industries had shut down and the migrants were facing devastating consequences of finding a way back to their villages, being dispersed to various relief camps, or staying put navigating emotional and physical survival (Arora and Majumder 2021; Suresh et al. 2020; Azeez et al. 2020). Therefore, due to the circumstances, it was impossible to study the aspect of industrial pollution. While I first started focusing on domestic and cultural waste, I found many tensions and revelations while visiting the floodplains and exploring agriculture and river pollution. Thus, reflections on human-nature relations through agriculture and leisure became dominant as discussed in Chapter 1.

No single method is equally and fully equipped to tackle every research question (Laslett and Rapoport 1975, p.969). Among multiple methods, qualitative methods include in-depth interviewing, field observation, analysis of various documents, and attention to visual and verbal discourses (Cousins 2017; Sprague 2016; Mugerauer 2010). These harness methodological multiplicity promoting critical insights for political ecology analysis through place-based understanding developing a wider picture (Bryant 2017). Ethnographic research in Chilla *Khadar* and surrounding areas was conducted from March 2021 to December 2021.

This involved semi-structured/open-ended interviews, participant observation, and visual illustrative methods such as photography, mapping, and walking tours.

Auxiliary methods such as document analysis were also used. City plans, official documents, NGO reports, and internet sources such as blogs and online articles were analysed ethnographically revealing instances of politics of knowledge and power shaping socio-ecological conditions and actions. Thus, ethnographic studies unveil practices of thinking about, relating to, and using biophysical elements (Escobar 1998, p.61). In other words, the 'everyday state', as an ensemble of deeply enmeshed actors is unveiled (Ranganathan and Balazs 2015, pp.411-412).

In total, 58 semi-structured interviews were relevant. This included interviews of 13 tenant farmers, 12 land-claiming farmers, 6 upper-middle-class *Dilliwale* and 2 lower-class *Dilliiwale*, 3 housing rights activists, 7 environmentalists, 5 housing rights lawyers, 2 environmental lawyers, officials from Delhi Jal Board, 3 from Delhi Development Authority, Ministry of Jal Shakti (Central Ground Water Board), Indian National Trust for Art and Cultural Heritage (INTACH), Department of Animal Husbandry, Dairying and Fisheries. A full list has been mentioned in Appendix 1, Table 3. On top of this, I had numerous informal interactions outside of these interviews with most actors. I have elaborated on how I gained access to these actor groups concerning my own positionality below. The political ecology of these categories has been described in detail in relation to the research context in Chapter 4.

As stated above, the Yamuna River was also considered as an actor in the research. Baviskar (2020) identifies the Yamuna as being perceived by the citizens of Delhi as a 'non-place', devoid of history, identity, and social relations. Its history and identity were recognised by the various data collection methods. Talking to various actors revealed history and its various social ties. I observed the river, looking at how it changed shape, colour, width, and character due to factors such as dams, sand mining, extraction of water, pollution, monsoons, melting of the glacier in summer, groundwater recharge and so on. Through illustrative ethnography, I was able to reflect on the changing identity of the Yamuna in Delhi. Narratives within my own positionality could be built by dialogue with the photos taken. This was paired with field notes. Auxiliary data collection methods such as maps, walks, life stories, blogs, tweets, newspaper articles, NGO reports and so on gave me various

perspectives about the river in multiple formats. All these various data collection methods turned the ‘non-place’ into a ‘cultural landscape’ (Sauer 1963) which could be critically analysed.

COVID-19 became a time of both restriction and possibility. Initially, the fieldwork plan was curtailed, but it was then reimagined. Fieldwork practices were forced to turn digital to whatever extent they could.

Table 1. below details the data sets used to address the three research questions covering various actors. These data sets have been elaborated on in the next section.

| Research Questions | Data sets | Actor groups | Timing |
|---|---|---|---|
| 1. What power dynamics are at play in the Yamuna floodplains analysed through the political ecology framework? | Semi-structured/open-ended interviews, conversations, life histories, policy documents such as NGO reports, state documents, illustrative ethnography, participant observation | Actor groups focused on- Land claiming farmers, tenant farmers and fisherfolk.<br>Actor groups incorporated to contextualise the research- environmentalists, upper-middle-class *Dilliwale*, lower-class *Dilliwale*, state employees such as DDA and Fisheries, lawyers, housing rights activists, and cultural leaders. | Semi-structured/open-ended interviews: March-December 2021 |
| 2. What is the nature of the environmentalism of the farmers and how does this relate to the environmentalism practised in the | Semi-structured/open-ended interviews, conversations, life histories, policy documents such as judicial expert reports, judicial cases, NGO reports, state documents, newspaper articles, illustrative ethnography, participant observation | Actor groups focused on- Land claiming farmers, tenant farmers, judicial experts and river Yamuna.<br>Actor groups incorporated to contextualise the research- environmentalist, upper-middle-class *Dilliwale,* state employees such as DDA. | Auxiliary data: February 2020-June 2023<br>Participant observation and illustrative |

| | | | |
|---|---|---|---|
| rejuvenated Yamuna initiative? | | | ethnography: April-December 2021 (these interactions were broken based on various lockdowns and government health advisories |
| 3. How do the dispossessed negotiate, navigate, and compete under the rejuvenated Yamuna initiative? | Semi-structured/open-ended interviews, conversations, life histories, policy documents such as judicial reports, judicial cases, state reports, NGO reports,<br>illustrative ethnography, participant observation | Actor groups focused on- Land claiming farmers, tenant farmers, housing rights lawyers and activists and River Yamuna.<br>Actor groups incorporated to contextualise the research- environmentalists, state employees such as the DDA | |

Table 1. Data sets used to address research questions

### 3.4.1 Interviews

Through interviews, people not only convey their accounts of the world, but the process also makes them reflect on their experiences and beliefs. Interviewing is a form of social interaction. Therefore, our speech is tailored to the context, influenced by prior experiences and intersectionalities. In other words, social power and privilege play an impactful role in interactions. This means that conversation is co-constructed and performed (Sprague 2016). Deniz (1997) identifies interviews as a 'new telling', where interviewees are symbolic figures drawn from research area settings. These factors cannot be completely removed from any interaction. Therefore, these power dynamics were acknowledged, noticed, and accounted for throughout the research process (Sprague 2016, p.159-160).

The mode of the interview was decided based on the respondent's convenience and comfort (Laslett and Rapoport 1975, p.971). Due to Covid restrictions, most of the institutional and upper-middle-class interviews were done either online or telephonically, based on the person's preference. All family members in Chilla *Khadar* did not have access to mobile phones, as usually one phone was shared by a family, with the male head having the most access. Therefore, to gather the most diverse views possible, interviews with farmers were conducted face-to-face during the various periods when the lockdown was lifted. Two things made the continuity of these interviews uncertain. One was the eminent possibility of a lockdown. Two, was the imminent threat of eviction. Therefore, during lockdowns, I focused on upper-middle-class and institutional interviews and as soon as lockdowns lifted, I used to go to the research area and interview farmers.

The three sets of actors approached interviews differently. A few institutional interviewees asked for questions beforehand and almost took the reign of the interview themselves reading out the questions in order and answering them. Several of the upper-middle-class interviewees right from the start stated that this was the first time they were contemplating the topic of pollution in the river and hence did not have much knowledge. The farmers saw the pollution of the river Yamuna as an everyday problem that they dealt with. While the institutional and upper-middle-class interviews lasted for around 30 minutes to an hour, the interview with farmers lasted anywhere between 5 minutes to an hour and a half with various people joining and leaving the conversation. How these interviews went through questions thematically and later got focused has been elaborated on below. Some

conversations happened in the fields where the farmers continued working and asked me to follow them around and some happened while they were resting, having lunch or tea. Information provided in interviews was analysed by situating them within the rest of the data (interviews, documents, literature). Some interviews were followed by a second and third conversation to elaborate on important threads. These follow-up interviews also because a means to cross-check information.

Most of the upper-middle-class and institutional interviews were recorded easily as they took place online. Attempts were made to record the interviews with farmers but due to high wind and open areas, the quality was not good. As a result, along with recording the interview, detailed research notes right after the interviews were audio recorded by me in a quitter area and later transcribed. In the case of all actors, mostly it was after I was done with touching the topics I had prepared, and the interviewees had more space to ramble that the most revelations were made about power dynamics, processes, and phenomena. This again was captured within the research area notes (that I later recorded in audio format).

Interviews happened jointly with 3-4 people and individually. A stark difference was that while most of the upper-middle-class and institutional interviews happened in official/semi-official online spaces created by both the interviewer and the interviewee, the interviews by farmers almost exclusively happened in their own spaces of home and work.

Participants' agency and rights to privacy and confidentiality have been respected and hence all interviewees have been anonymised. However, this was not the case initially. In the beginning, I asked the participants if they wanted to be named or not. However, when the degree of evictions and violence increased later, on the advice of the lawyers and human rights activists involved in judicial cases, I decided to anonymise all participants. This was also because, in this situated study, I have used detailed maps and pictures giving away exact locations due to which identifying participants becomes easier.

Often interviewees would take me personally to their friends and family to interview. However, many a time, I was called aside and told to be careful while talking to certain farmers I had been recently in touch with. In such instances information about if the other person had said something about them was hidden.

Most interviews took place in the Hindi language. Some upper-middle-class and institutional interviews had a mix of English (commonly referred to as Hinglish). The farmers often spoke Hindi with a mix of various other languages such as Bhojpuri, Rajasthani, and Bengali. Often while Hindi was not their first language, they were fluent due to spending decades in Delhi and often being born in the state. I translated and transcribed all interviews using Microsoft Word.

### 3.4.2 Participant Observation

Gupta and Ferguson (1997) identify participant observation as the defining trait of ethnography. Moreover, Crang and Cook (2007) state that participant observations and interviewing should not be considered separate methods at all. While ethnography emphasises access to people's everyday lives through participant observation, this access stays limited and cannot claim to encompass all lived experiences (Park and Littleton 2007, p.6). Passaro (1997) states that participation and observation can be seen in dialectical tension. This recognition demands attention to multiple perspectives to produce social descriptions and analysis. I used this method with the upper-middle-class *Dilliwale* and the farmers.

As stated above, field notes describing subjective understandings that developed in the interviews were taken right after the conversation. Most of them were audio recorded and then transcribed. Some were written down.

Observation and participation happened simultaneously. As stated earlier, I had brief interactions with the farmers in the region previously during my bachelor's degree when I had taught primary school students. I once again wore that hat and started teaching in classes run by an NGO. This was a unique case due to two things. One, the NGO was at its inception stage. As a result, one of my duties became going into the homes of farmers and encouraging them to send their kids to the classes. Two, due to the pandemic, all schools were closed. As a result, families were very welcoming to an NGO offering in-person classes (with precautions such as holding classes in an open field, wearing masks, maintaining distance, and using sanitiser). The NGO operations closed within a few weeks, due to constant lockdowns making it hard for the teachers to travel to the area and the region

having no public transport forcing them to walk for miles in hot Delhi summers. However, I had become known in the area and continued being welcomed by greeting kids and parents.

With every visit to Chilla *Khadar*, trust was built and opportunities for participant observation grew to provide valuable insights. My role as teaching primary students various subjects in Chilla *Khadar* through the NGO played an important role in this trust building. Often kids would take me to their homes to meet their parents allowing me to somewhat be a part of their everyday activities and routines. Classes usually ended just before lunchtime and gave me an opportunity to sit with women while they cooked their meals. The rest of the family often used to join the conversation seeking help with various sorts of paperwork such as opening bank accounts, getting Adhar cards and so on. The importance of this will be elaborated in Chapter 6 stating the everyday resistance of farmers. This has also been elaborated on later as my positionality as an upper-middle-class English-educated woman assisted my access to private spaces such as homes.

Going in the area through multiple routes allowed me to meet multiple people, including the land-claiming and the tenant farmers. I went to the area at different times. Vegetable markets were held in the early mornings. During these times I sat along with various people setting shops and chatted with them. This was followed by farming activities where I was often told to follow and have a chat. Afternoons were reserved for preparing lunch, having lunch and rest. Evenings were full of household chores, dinner preparation and leisure. People who worked alongside farming came back during this time. I never stayed after sunset as there were no streetlights to guide me back to the main road and home. People avoided travelling in and out of Chilla *Khadar* after sunset due to this reason.

While in Chilla *Khadar,* I got an emic, or insider-like perspective. However, in the upper-middle-class circles, I was an insider. This gave me access to various meetings and interactions. However, this also led to ethical dilemmas as essentially every time I met people in family gatherings, on the street, friends, neighbours and so on, I would be asked what I was doing nowadays, and it would organically lead to discussions on the Yamuna and its pollution. Again, these ethical dilemmas due to my positionality are discussed later.

### 3.4.3 Illustrative ethnography

Following Harms (2020), 'reflecting on images' is used as a tool to further ethnographic analysis bringing together the social/material, human/non-human. Here, the act of selecting images is in itself an analytical process transforming interpretations by creating a dialogue (Harms 2020, p.52).

Illustrative methods incorporating elements such as photography and images have been widely used in ethnography dating back to the 1920s (Pauwels 2013; Blerk 2006). They evoke sensory knowledge that might not be fully considered in conventional data collection tools such as vocal semi-structured interviews (Baumann et al. 2020, p.2248).

Visuals have been used in two ways in this project. These aided in focusing discussions and were integrated within the semi-structured interviews conducted. Therefore, they were used to extend and refine discussions already taking place within the interviews. One, is photo-elicitation, a visually based approach to qualitative interviews (Sherren 2013, p.67). Here I showed participants images to instigate conversation. This was mostly done while interviewing the upper-middle-class *Dilliwale*. The need for it arose with them especially as out of all the actor groups, they were the only ones who needed to be introduced to aspects of the topic. For instance, in preliminary interviews a lot of times I was asked questions such as, "What's the relation between Akshardham Temple and the Yamuna floodplains?", "What is Commonwealth Games Village?", "Is farming happening in Delhi?" and so on. Visual images used in the photo-elicitation method can come from personal photo collection, internet sources, advertisements and so on (Lorenz and Kolb 2009, p.243). It is important to be mindful that images offer multiple perspectives and interpretations (Packard 2008, p.68). Therefore, when conducting interviews online, usually on platforms such as Zoom or Teams, I would share my screen and show the interviewees pictures and maps to help them place the context of the discussions. In terms of maps, I shared the Delhi Master Plan Map 2021 (2007). For images, I searched on Google and scrolled through stock images opening any particular ones that caught the attention of the participants. This was done randomly as the intention here was to introduce topics of discussion as opposed to media analysis. Therefore, the image was analysed and located within the larger context mutually. This started a process of co-creation of knowledge. Often, I got the response that the participants didn't know about various aspects and that it was the first time they had

really thought about it. Moreover, often, I was contacted again by participants in this actor group sharing further thoughts or even just forwarding articles on the topic saying that now they were “paying more attention”.

The second method involved participants showing me pictures, maps, and documents and even was taken on physical walking tours by the participants. This was mostly done by institutionally recognised experts and farmers. Often, I was instructed verbally to look at documents or send them electronically. Interviewees also shared their screens, taking me through maps and images themselves. Additionally, I was invited by stating, “Come we’ll show you”, and taken on walking tours of various parts of the floodplains. The farmers also used visual means such as drawing rough maps on the mud using sticks. Even the middle classes shared their screen in some instances to show me pictures of their ideal riverfront and floodplain use. These became important means of communication.

Packard (2008) states that while visual methods do not inherently reduce the power imbalance between the researcher and the participant, they possess a much greater potential for this to happen. In most cases, visual means instigated mutual discovery and refinement of research discussions. They became powerful stimuli that allowed the exploration of issues (Gregory et al. 2009, p.802). Overall, this allowed interviewees freedom of expression, furthering communication beyond the limitations of verbal means and incorporating complex, multiple, and varied views to a certain extent.

### 3.4.4 Auxiliary data collection methods

Gelfand and King (1998) define grey literature as unfiltered material, not published by established publishers. Grey literature was engaged robustly in addition to published and semi-published sources. Analysis of historical documents, public discussions, official documents specially published by the Delhi Development Authority, the Delhi *Jal* (water) Board, *Namami Gange*, judicial judgements, expert recommendations, and NGOs working on the issues became valuable sources of information.

The use of Hindi books was limited due to constraints such as unavailability online and the closure of libraries, universities, and bookshops. Instead, Hindi newspaper articles (paper and electronic) in a larger sense were engaged with. Tweets in Hindi also became an important source of information.

This data was continuously collected throughout the thesis process from February 2020 till August 2023. Relevant official documents from the Delhi Development Authority, the National Green Tribunal and *Namami Gange* along with documents published by ENGOs such as *Main bhi Dilli* (I am also Delhi) came out from 2020 to 2022. Relevant historical records mentioning various river development plans from these organisations were also considered. Initially reports on domestic sewage, industrial sewage, and cultural pollution were also included. However, during the fieldwork in 2021 the research focus narrowed to the transformation of the floodplains, these reports were excluded. Newspaper articles and tweets, however, were collected from the beginning of the PhD from February 2020 till the completion of the writing process in August 2023.

Primary qualitative data were recorded in the form of research area notes. As discussed above, a field 'diary' was maintained in the form of notes in audio, electronic and handwritten formats which were typed up later. This formed the core data of participant observation (Crang and Cook 2007, p.50). The notes described events, opinions, positions, conversations, and observations in great length. This became an important part of grasping the socio-ecological viewpoints of various actors. In other words, routines, the disruption of routines and personal reflections were noted down. I attempted to complete this process promptly after leaving the research area to capture fresh insights while they were still vivid in my mind. The focus was attempted to be pointed both while writing the notes and later while reflecting. Thus, comprehensive, and targeted styles of notetaking were followed throughout the research (Crang and Cook 2007, p.56).

Within official documents, the Master Plans of Delhi is the primary instrument that determines land-use policy. The judicial documents, such as judgements and expert recommendations related to the case Manoj Mishra v. Union of India & Others (Original Application No. 06/2012), were extensively studied. These documents have been seen as being interactive with each other. They were key in understanding the states and the judiciary's environmental, societal, cultural, and political views. Attention was also paid to how various actors viewed their opinions in the judiciary, who was allowed to view their opinions and how contradictory views were dealt with. These revealed the contestations between the normalised functions of the various environmentalisms at play in Delhi and the tensions in their enforcement. Moreover, the contradictions within the expert

recommendations and the final judgements also enlightened how decisions are based on 'external' factors making the technical judgement political and social (Faulkner et al. 1998). These aspects make the technical documents highly situated and contextualized. Studying the power dynamics underlying these documents enriches the political ecology analysis related to spatial planning, environmental knowledges, and resistance, therefore becoming a thread within the thesis.

## 3.5 Data analysis

All interviews and pictures were transferred to the University OneDrive for security on the day of the interviews and research area visits and deleted from the phone storage. These were later played and viewed for analysis. Audio material was referred to whenever necessary during the writing process.

Transcribing the interviews and field notes forms part of the initial analysis and sense-making of narratives. Therefore, transcribed data was not considered 'raw'. Rather, it is constructed (Crang and Cook 2007). Photographs were treated as documents that contextualised the research. However, they were not coded. Denzin (1997) states that transcripts fail to capture entire universes. Therefore, they should be considered as a slice of a unique experience rather than the whole. Therefore, interview transcripts were analysed as data that was discursive and performative (Domosh 2003). These transcriptions were reread multiple times, especially during the early stages of the analysis. Brown and Gilligan (1992) advise listening for the 'plot' in the first reading. Noticing what happens, how events unfold, and how the interviewee is situated within the plot. This reveals shifts in narration, inconsistencies, absences, reversions, contradictions, and complexities within interviews (Gregory et al. 2009, p.606). This also revealed my own positionality and power relations within the interview, while transcribing and during analysis (McDowell 1998, p.2041).

Coding was conducted using Microsoft Word and Excel. Several tasks such as on-screen coding, note-taking, writing reflections, and searching for keywords can be taken care of by common word-processing programs, especially in narrative and discourse analysis (Brinkmann and Kvale 2019; Crang and Cook 2007; Polkinghorne 1995).

Analysis was done in informal and formal ways. Informally, the data was analysed by piecing it together, figuring out the process, and gaining focus and direction throughout the

research (Crang and Cook 2007, p.132). Formally, analysis was done by coding and organising. Initially, emergent categories, themes, and concepts in the data were identified. I was alerted to these themes due to my own research experience, repetitive data and attending webinars. The research questions fed into the analysis and vice versa. These were reiteratively coded and re-coded into finer sub-categories through critically connecting, condensing, and cluttering. In other words, an iterative dialogue full of forward-backwards-movement was undertaken with the data (de Casterle´ et al. 2012). This produced and revealed overall essential themes, concepts, and phenomena.

Attention was paid to interviewees' understanding of concepts such as pollution, floods, and the environment. This understanding is compared and situated in the dominant environmental narratives present in the discourse driving environmental plans in Delhi. Triangulating various environmentalisms of extremes of ecological conservation, use of Green Revolution techniques of chemical fertilisers and viewpoints in between enabled a complex triangulation and destabilisation of dichotomies.

I spoke to a range of actors, often in contestation with each other over various perspectives. This often came up in interviews as I would bring up the latest information for discussion. These instances brought up the most important discussions where historical and shifting power dynamics would be revealed. These discussions were vital to understanding the various cracks within various environmentalisms and links to one another.

Crang and Cook (2007) argue that writing and analysis are inseparable. As a result, fieldwork interviewees were contacted during the writing stage if more data was needed. In other words, doing, interpreting, and writing was done iteratively. The aim was not to develop a definitive account. Perceptions vary depending on the structured positionality of the speaker (Castree and Braun 2005). One of the reasons why qualitative research cannot produce definitive accounts is due to the researcher’s own biases at play throughout the process (Mayoux 2006, p.123). It was to try to understand the inter-relations and multiple versions of reality as discussed above (Crang and Cook 2007, p.149).

In total 65 interviews were done. However, only 58 were considered for analysis as 7 were exclusively about pollution due to factories and industrial workers. As stated earlier, this angle of the latter dropped due to the workers being scattered due to COVID-19. Out of this transcription of all interviews led to around 108,000 words.

### 3.5.1 Emic and etic

A balance needs to be created between the local insider perspective (emic), and the outsider perspective (etic) (Núñez 2017, Pauwels 2015). As discussed above, making sense of a phenomenon necessitates involving multiple views and perspectives. To elaborate, the emic perspective deals with how phenomena are perceived and interpreted within a system. The etic perspective deals with theoretical classifications and analysis (Grenier 1998). Ethnography gives value to how people interpret their own experiences and expressions. However, Crang and Cook (2007) state that analysis of this pure emic perspective is 'virtually impossible' due to the prejudices brought in by the researchers themselves. As a result, even emic categories will be theory-driven. Hence, the clear binary between emic and etic is not straightforward (Crang and Cook 2007, p.140).

Transcriptions, diary notes, photographs, grey literature, and discussions during the monthly supervision meetings were used to produce emic and etic categories. First transcriptions were summarised briefly and then grouped according to various topics. This was done using MS Excel, MS Word, and paper charts with sticky notes. Analysis and initial thoughts, outlining key findings and insights, were mapped down, and sent as writeups or presented as a PowerPoint presentation to my supervisors. These helped me concrete my ideas and create a flow within them. As the analysis became more focused, the ideas and flow became more refined. This was then structured into the PhD framework dictating chapters and word counts. A mixture of limitations set by the PhD framework, the significant topics that emerged out of the fieldwork, the novel findings and the theoretical and conceptual linkages became the driving forces of consciously choosing analytical categories.

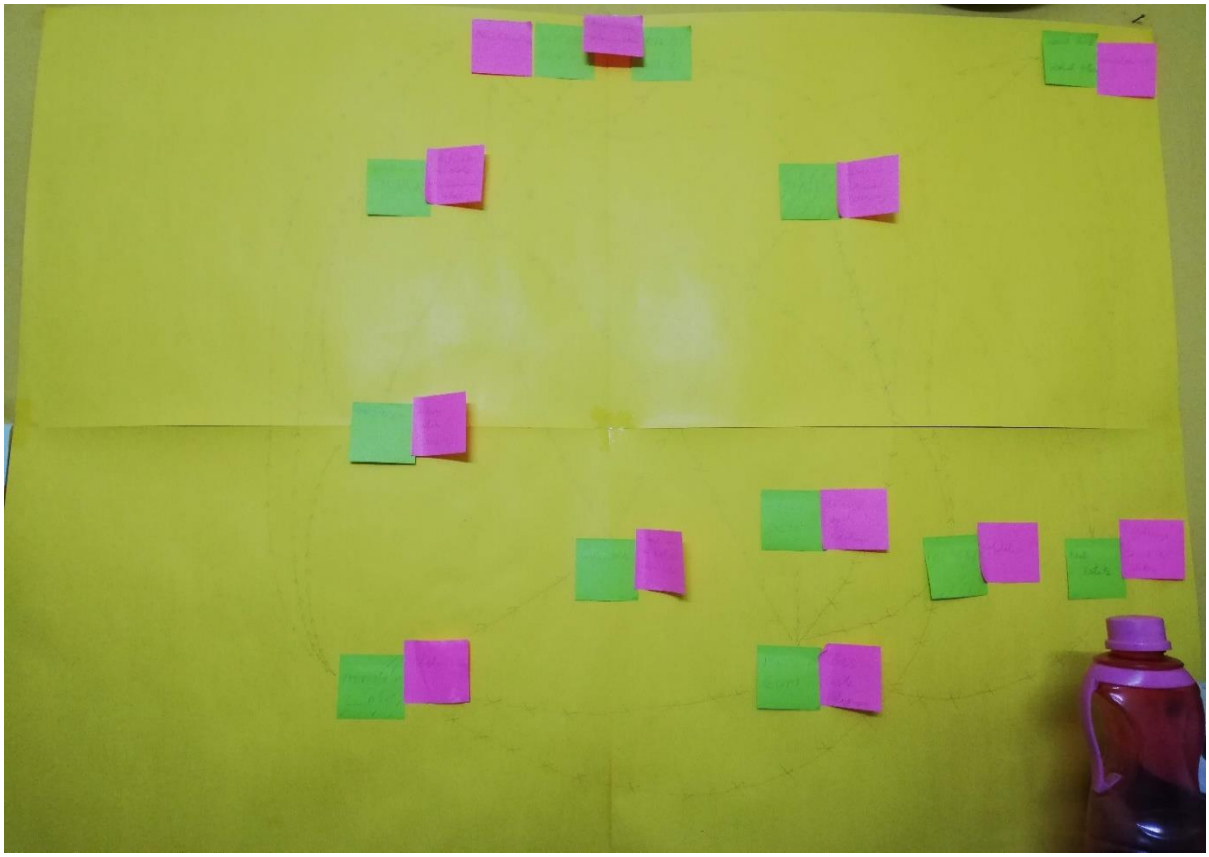

Image 2. Connecting ideas on paper charts with sticky notes, by Shivani Singhal, September 2021.

| Emic and etic | Research Question |
|---|---|
| • Multi-layered marginalisation<br>• Land grab<br>• Socio-ecological dispossession<br>• Evictions<br>• Intersectionality | What power dynamics are at play in the Yamuna floodplains? |
| • Knowledges<br>• Socio-ecological marginalisation<br>• Greenwashing<br>• Beautification | What is the nature of the environmentalism of the farmers and how does this relate to the environmentalism practised in the rejuvenated Yamuna initiative? |

| | |
|---|---|
| • Fragmentation of ecological actions<br>• Socio-political solutions<br>• Resistance<br>• Citizenship | How do the dispossessed negotiate, navigate, and compete under the rejuvenated Yamuna initiative? |

Table 2 Emic and etic categorisation.

Most of these categories interact with each other and are not separate. Various disciplines such as anthropology, sociology, development studies, political economy, geography, planning, decolonial studies, feminist theories, policy, and legal studies are drawn from to explore these categories. The validity of these interconnections was tested in various conferences, webinar presentations, talks, poster presentations and general academic discussions.

## 3.6 Reflections and positionality

Here I reflect on my positionality and negotiations within various actor groups in Delhi and specifically in Chilla *Khadar*. A range of constructed and situated identities constitute one's presence (Iveson and Fincher 2011, p.862). This dictates the nature of information exchanged. Details about my identity, interests and background were shared (Núñez 2017, p.466). Factors such as class, gender, education, caste, and religion were all factored in within the ethnographic fieldwork.

### 3.6.1 Gaining access

The relations in the research area, access to data, institutions and people all depend on power dynamics and positionality (Gregory et al. 2009, p.556). There were various ways in which I gained access to the people in Chilla *Khadar*, NGOs working in the area, government employees and so on.

Tenant farmers in Chilla *Khadar*- Living adjacent to Chilla *Khadar*, it was not difficult to gain information about the area. From my mother's Yoga group, I got the information that a local

NGO[16] was active in the area. I met the head of this NGO, initially just for an interview. However, I was told that the NGO was starting classes for primary-level students in Chilla *Khadar* and wanted me to be one of the teachers. As mentioned above, the NGO had been quite new and its work in the area had fizzed out soon. Therefore, people did not associate me with the NGO itself but as an independent teacher. This worked to my advantage as people had gotten to know me without associating me with the work and values of the NGO. In India, Government school teachers are assigned duties such as making election cards, Adhar Cards etc. As I was known as a teacher in the area, I started being associated with being knowledgeable of paperwork. Therefore, often people showed me their various ID proofs and asked me for basic information about updating, changing addresses, making cards for new family members and so on.

Land-claiming farmers in Chilla *Khadar*- Land-claiming farmers lived in Chilla Village and came to Chilla Khadar to work and monitor the area. I got to know that they were present in the area only in the mornings and evenings and timed my visits accordingly. Here my identity as a teacher did not hold much value as living in Chilla Village, ample resources for high-quality education were available to them. With them, I was a researcher writing a 'book'. I was often asked when the 'book was going to be published'. Having been part of prolonged legal battles about the land in Chilla Khadar, they were well-versed in the legalities and governance aspects of the area. Some of them commented that the research was not going to help their socio-legal battle, and this has been elaborated on later.

Official actors (state employees, lawyers, judges, environmentalists)- Most of these actors were interviewed through the snowballing process. Initially, a combination of sending cold emails and using जान पहचान (knowing people) was used. Both methods yielded positive responses and initiated a snowball process, expanding the scope to cover various fields. The cold email quickly transferred to WhatsApp messages. As this time was between the start of the lockdown and people getting used to working online completely, I found that people got more breaks in their schedules and were free for longer chats. However, this was also the second wave of Covid. As a result, a lot of people got Covid or were grieving lost family

[16] While this NGO can be categorised as working in the sector of health, it had a lot of Hindu cultural aspects. Along with promoting health (exercise and Yoga), it also took actions to work on education, food insecurity, and the environment.

members and friends. As the situation got better, in the end, I got to conduct some interviews face-to-face and was even invited to events and talks. These spaces gave me a chance for casual conversation and observation.

Upper-middle-class *Dilliwale*- I am an upper-upper-middle-class *Dilliwali*. Therefore, 'gaining access' to this group was the easiest. However, shedding my preconceived notions and posing probing 'why' questions proved to be the most challenging with this group. My own prejudice came to the forefront the most with this group. As a result, I tried transcribing these interviews, especially initially, and analysing them to catch areas where I had to pay more attention. Here again, my education at a UK university assisted me. Many individuals had children studying outside India, and they wanted me to succeed. Additionally, numerous parents sought advice on sending their children to study in universities outside India.

### 3.6.2 Identity

Discourses are framed differently based on time, space, social context, experience, and positionality. There are limits to reflexivity as we cannot be fully conscious of various dynamics with ourselves. The flexibility, mobility, and complexity of positionality within various axes, spaces and times creating the 'unknowability' of the positionality of us and others (Haraway 1989) is also kept in mind.

Identity is forged through relational, historical, and geographical practices (Gramsci 1978). In the field, I was open about my own identity (especially class and caste), interests and background (Núñez 2017, p.466). Ethics of this positionality were maintained by respecting the participant's agency and following the university ethics of privacy, transparency, and confidentiality.

My identity played a role in how people interacted with me, if they interacted with me, the topics they chose to focus on, how they portrayed themselves and so on. Being a young researcher, people found it easy to dismiss the research as 'not important'. I was often told to switch to some other occupation such as a government job as I had 'my entire life ahead of me' and I was 'wasting time studying a topic such as the pollution in the river' and doing so was 'wasting my education and earning potential'. This gave me insight into how people

viewed the seriousness of the polluted river, its impact on their lives, and their attached environmentalisms.

Being a young woman also impacted how I navigated the research area space. As stated earlier, I got invited within homes in the familial space as well as the fields in the workspace. However, this restricted my access to conversations in some gatherings such as groups of men discussing their daily affairs. Often the tone of conversations within these groups would change due to my presence. Words and topics were selected more carefully. When discussions got heated people would abruptly stop their dialogues saying that they do not want to say things more openly as 'a woman is present'.

While I found Chilla *Khadar* to be a comparatively safe space to visit daily, I had to be mindful of my own safety in certain situations. I made it a point to leave the area before sunset as there were no streetlights. In the later stage, when I conducted in-person interviews with various officials, lawyers, environmentalists and so on within private spaces such as their houses, I made sure to be accompanied by someone (either another researcher or in certain cases my mother).

My class also played an important role. All stakeholders except for the farmers could be roughly placed within my own class positionality in Delhi. This gave me immediate access to multiple spaces and people. Within these spaces, the fact that I was studying at the University of Leeds (arguably a matter of privilege and a signifier of class and caste) held weight.

There was always a question of recognising differences and positionality while trying to dismantle hierarchies. Within Chilla *Khadar* among farmers, physically, my dressing style, speaking style, how I carried myself and multiple such factors placed me as an upper-middle-class instantly. Researchers and research participants are placed within research encounters calling for transparency in positionality. Therefore, I recognised my privileges verbally too. However, while I had assumed that addressing positionality would assist in bridging the gap to whatever small degree, that was not the case. While conducting interviews I always sat down on the ground with everyone, and within some time special seats were brought for me. Even if I would decline, the seat was left for me in the area. This became a constant symbol of the power dynamics at play. Therefore, while this was noted and the reflectivity of the research process was enhanced, the difference in power

dimensions still very much remained present in conversations, almost as another actor (symbolised by the empty chair). In the end, the hope was that all people engaged would be able to use the discussions in some way or the other. This has been elaborated on below.

Religion and caste always came up especially due to the cultural significance of the river. Muslim and Christian interviewees often became hesitant to criticize the cultural pollution. Often when this question came up as part of my research protocol, Muslim and Christian interviewees would say, "You can't stop this from happening. It's a matter of faith." A Muslim environmental lawyer while talking about the Akshardham Temple built on the Yamuna floodplains identified the structure as polluting. This has been elaborated on in chapter 4. However, this conversation was initiated by him after stating how we both were talking as researchers and not as Hindus or Muslims. Another Muslim upper-middle-class man stated how he did not have the liberty to take any radical environmental action as he was more vulnerable against the law due to being a Muslim.

My caste was often inquired about in Chilla *Khadar*. This was not done directly. It was done in subtle ways such as by asking for my last name and enquiring about what my father did. This was especially the case while talking to cultural actors.

Social identity is grounded in the negotiation of multiple axes of power that keep on shifting. As the intersectionality of the interviewees affected their lived realities, even my intersectionality affected various dimensions of the research in various ways. Within the same interview, multiple angles of identities (both mine and the interviewee's) intermingled affecting the conversation. For example, a farmer while talking to me addressed me in multiple ways throughout the interview such as आप, तुम, तू (various ways to say 'you' signifying different levels of respect), and sir[17].

## 3.7 Ethics

Objectivity, rationality, and reason within ethnography are limited. In other words, the interaction does not happen rationally. Context, connections, and circumstances are important in influencing how people relate to one another. Problems are first addressed from an emotional place and then responses are formed to encompass a broader socio-

[17] In my experience, it is not uncommon for women in power to be referred to as 'sir'.

political issue. Generating new knowledge implies individual and collective emotion and passion (Baksh and Harcourt, p.2015). Thus, research encounters are mostly emotional, full of power differences and legitimise social hierarchy (Gonda et al. 2021, p.5). Interviewees co-generated various emotions and meanings for both me and the interviewees. Grief, happiness, relief, friendship, hospitality, forgiveness, ego, clashes, tensions, and struggles are expressed verbally and physically. In short, ethnography is an emotional process, and it matters in the data collection process. However, it is important to not objectify the emotions of the researched within this process (Sultana 2017, p.634).

Ethical considerations encompass questions of duties, obligations, and responsibilities (Gregory et al. 2009). The formal ethical process agreement and guidelines did not necessarily act as a template. At every step of the way uncomfortable, unexpected, and uncertain scenarios had to be navigated. Rather it was training to reflect on the relations between knowledge, agency, power, and positionality to be rethought throughout the fieldwork and even later. It was a constant process of negotiation and learning. Instead, a responsible openness was needed to tackle uncertain scenarios. Relational vulnerability in research encounters is explored in this section. Emotional challenges, contradictions, and tensions in carrying out the research are reflected on.

While these aspects of ethnographic research are not new, they were heightened during the pandemic. My own connection to the social and ecological problems needed to be faced starkly. Hierarchies of power and social differences were felt at every step.

Within the research area, going to people's homes was always laden with the worry of me acting as a virus carrier. Here the difference between the ethics form, institutional requirements and on-ground choices could be seen. As per the institutional requirements, in the ethics form I had mentioned that in the in-person interviews, I would be providing the interviewee with a face mask and sanitiser. However, while I did provide face masks to all my interviewees, most of them politely declined to use them or kept them aside. Another dilemma regarding the pandemic interactions was social distance. As mentioned earlier, a lot of times when students saw me approaching, they would run towards me. In these instances, it was impossible to maintain social distance. Sharing food is an important symbolic gesture to break the social constraints of caste, religion, and class in India. Related to this was also a question of gifts. In some instances, the farmers would send me home

with fresh vegetables from their farms. Taking the vegetables would mean a breach of the University guidelines and not taking the vegetables would be considered rude socially. This again could not be done as per the ethical requirements of only having a verbal exchange in the data collection process due to Covid precautions.

Often, after interviews, especially with interviewees my own age, I would stay in touch later. This presented ethical dilemmas as formal interactions via email converted into friendly interactions via WhatsApp and later social invitations. The boundaries blurred even more as I am from Delhi, and catching up with friends would lead to the mixing of my childhood friends and people I had met during the fieldwork. These informal and candid interactions became an important factor in shaping my understanding of the research topic. Social networks based on kinship and friendship are a vital component sustaining the chain of migration (Rooker 2011; Castles and Miller 1998). I became a small resource within this chain as mentioned above due to helping farmers with paperwork. While conducting interviews in public spaces, which was mostly the case in Chilla *Khadar*, people could easily eavesdrop. Friends and neighbours of the interviewee would also pop in midway and start pitching in. In such cases, the principles of privacy and confidentiality became hard to follow fully. Thus, questions of ethical approvals became blurry. How many times was it necessary to take consent? In what circumstances would it be all right to not take consent? What was said to me as a friend and what was said to me as an interviewee? How could I best ensure that my analysis was not becoming biased based on friendly interactions?

Transparency was maintained by being clear about the research topic, access to findings, and the possible benefits to the community and the river. A farmer in Chilla *Khadar* stated bluntly that I would just collect data and write my 'book' and nothing is going to change. In the field, these arguments were acknowledged, and the benefits of the research were realistically stated. The real-world impacts of the research, in its current form, remain alarmingly limited. It has not been possible to create long-term accountable relationships with the farmers and materially support them to achieve a degree of justice as a part of this thesis. Moreover, it has not been possible for the research to be more participatory in shaping the research questions, guiding the methodologies, having authority over the data,

and being involved in producing outputs. In short, the thesis within the academic framework prefers the institution's interests and my professional interests over the needs of the communities. A reason for this limitation can be attributed to the boundaries set by the thesis format and ethical process. However, reflecting on ethnographic ideas, expectations, and interests, my positionality creating power differentials and shaping research relationships, risks to the community, and maintaining transparency have shaped the thesis for the most part due to the ethical process (Goldhar et al. 2022; Wilmsen 2008). Therefore, Wilmsen (2008) holds these limitations and considerations in tension with each other and recognises that during different circumstances these may change and happen simultaneously. Petras and Porpora (1993) identify a 'parallel process' where a researcher can engage in mutually beneficial exchange by supporting communities in multiple ways such as documenting injustice, writing about issues on various platforms to inform the broader public, and providing specialised skills. As mentioned above, by helping farmers with sorting out paperwork and creating financial proposals in English for small NGOs run by the tenant farmers, I took part in this parallel process. This situated thesis aims to focus on developing better accounts that offer practical value to the marginalised (Wilmsen 2008, p.10).

## 3.8 Conclusion

This chapter deals with the challenges of positionality, access, responsibility, fear, and identity embedded within the ethnographic process. It deals with the flexibility of the project that created multiple ethical dilemmas. I have attempted to bring out the formal and non-formal methodology of the thesis. While the methodology has been driven by formal ethnographic methods such as interviews, participant observation, visual means, and auxiliary methods, it has been pushed forward by various 'informal' factors such as my own identity, positionality, and geographic location. While common to all ethnographic processes, these factors of formal and informal factors have played a role right from the start of the PhD journey of the selection of the topic, formulation of the research questions, gathering and analysing data, writing, and editing. These factors while common to all ethnographic processes, they were starkly highlighted due to the COVID pandemic. Both the socio-ecological conditions of the Yamuna floodplains and the research process can be characterised as highly volatile.

# Chapter 4 Environmental governance of the Yamuna waterscape

## 4.1 Introduction

This chapter provides a thick description of the Yamuna floodplain waterscape to contextualise the later chapters that address the three research questions. The various transformations to the waterscape, including the creation of bio-diversity parks, are theorised by the overlaps of bourgeois environmentalism and environmentalism of the dispossessed. By unpacking the complex environmental governance of the floodplains, the changing political ecology of the waterscape is contextualised. Various actors such as the land-claiming farmers, tenant farmers, state, judiciary, environmentalists, and housing rights activists are involved in transforming the floodplains. After establishing the power dynamics between various actors, the current policies, plans, and documents being implemented in the floodplains will be analysed by politicising them through comparison against ethnographic interactions. This will reveal the historical systematic inequalities leading to the displacement and dispossession of the marginalised.

I draw on a scoping literature review (academic journals, books in Hindi and English language, grey literature), especially official planning documents published by the Delhi Development Authority (DDA) (Delhi Master Plan), judicial judgements (Manoj Mishra v Union of India & Others (Application No. 6 of 2012)) and reports by various environmental and human rights NGOs. These documents were iteratively analysed as they have been instrumental in driving large-scale socio-ecological changes on the floodplains and have driven the mainstream discourse around river pollution. They were specifically zoomed in on when the research focused on the creation of bio-diversity parks on the floodplains in the later stages of the fieldwork in 2021.

While currently 10 biodiversity parks are being created by evicting all farmers (DDA 2020), the floodplains have transformed over the years through first farming and then through various ad-hoc development projects. This chapter analyses the political ecology of the Chilla *Khadar* waterscape by first introducing the land-claiming and tenant farmers and then historicising the occupation in the area legitimises it. Then it discusses how some parts of the floodplains were developed in a piecemeal way by the Delhi Development Authority and how the National Green Tribunal stepped in to stop large-scale contractorization of the area

due to resistance by mainstream environmentalists and farmers. Lastly, it 'sees' the socio-ecological impact of the creation of bio-diversity parks in the research area. This analysis contextualises the waterscape to address the three research questions in the coming chapters.

## 4.2 Urbanisation to form a world-class city

As described in chapter 1, currently the waterscape is being remodelled from an imaginary of rural space with farms to an urban one with parks. These changes reflect the aspiration of the megacity of Delhi, a symbol of India, to visually reflect the world-class environmental imaginary of a developed country as discussed in Chapter 2. A characteristic of the process of this transformation is illegal/informal/illegitimate large-scale inward migration and haphazard outward sprawl (Deshkar 2019, p.132). This illegality becomes a feature of 'progress' and 'development'.

To create this imaginary, right from its conceptualisation, the Delhi Development Authority, the planning agency of the state formed to oversee the planned development of the city, acquired large agricultural lands and the commons and 'modernised' them as commercial, institutional, housing, industrial, sports and green areas (Pati 2022; Dupont 2000; Soni 2000). Figure 11 below depicts the depleting agricultural area on the floodplains due to urbanisation comparing 2001 to 2011. Following the pattern of modernisation, while the floodplains coming under the Flood and Irrigation Department were considered to form the periphery, they now are considered the prime location of the city (Baviskar 2020, p.97). Therefore, there was a demand to 'develop' the area to look like the constructed imaginary of London, Paris, and Singapore (Gill 2014, p.71). Politicians, media, developers, property owners, and upper-middle-class residents all came together to further this mandate.

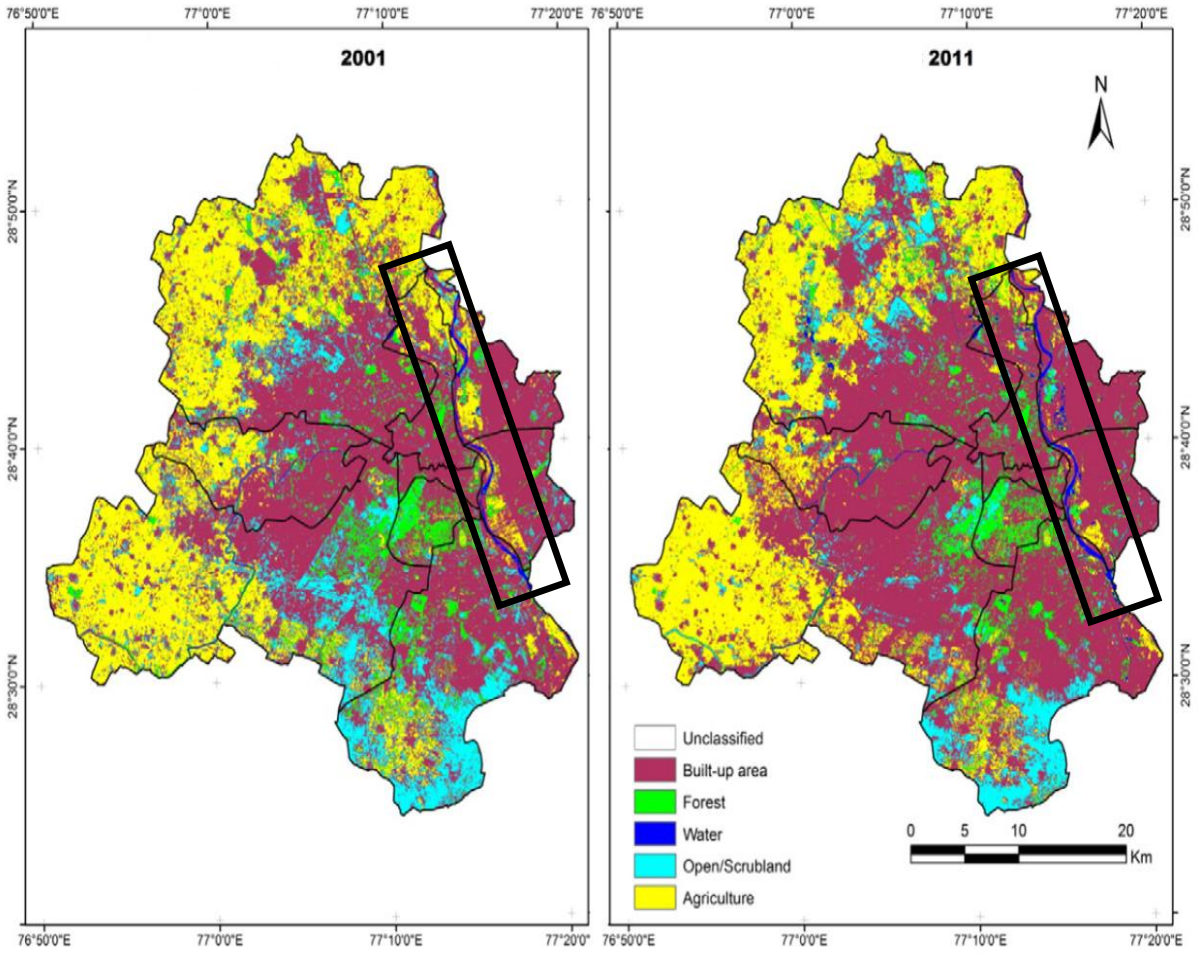


Figure 11. Decrease in agriculture (marked as yellow) on the Yamuna floodplains due to urbanisation, Adapted from Ahmed et al. (2016, p.113).

However, the land that was transformed was not an empty space but was vivid with embodied practices (Baviskar 2020, p.38). The urban development that pulls people from the rural areas to the cities is also the one that causes their displacement from the city to first the fringes and then out. This displacement is not matched with resettlement and has arbitrarily taken place (Banerji 2005). However, urbanisation is portrayed as development and progress, hiding the distress of the displaced. This is managed through technocratic-expert knowledge and upper-middle-class governance arrangements (Swyngedouw 2023). Overall, while the DDA envisions a hygienic and orderly city, it fails to make provisions for the working poor. Thus, the city grows through exclusion (Kundu 2004, p.273).

Almost all of Delhi's population has migrated to the city with around 3,00,000 migrants arriving annually. This may increase in the future due to environmental factors such as water scarcity (Ray and Shaw 2019, p.42). It is estimated that the population in Delhi grows

50% naturally and 50% by migration (DDA 2007, p.2). This makes it "*multi-cultural, cosmopolitan city with second largest in-migration in the country*" (DDA 2021, p.2). Datta (2011) calls it a 'mongrel' city where no one really comes from and where there is no singular cultural identity. However, stigmatisation for being migrants is practised selectively. While white-collar professionals are generally welcomed, there is hostility towards farmers and daily wage workers. Routinely laws are disregarded that protect their rights and needs (Suresh et al. 2020). Both their livelihood and residence do not stay immune to evictions and demolitions to 'clean up' the city (Guru and Chakravarty 2006, p.138). This clash between migration and urbanisation intersects at the edges of the city (Roy 2002, p.10) and can be seen at play among small-scale farmers in the Chilla *Khadar* waterscape.

### 4.2.1 Socio-ecology of Chilla *Khadar*

As stated in the previous chapter, I use the Chilla *Khadar* waterscape and its surroundings as the research area. Considering local sites as points of departure for a political ecology analysis is useful for identifying how various actors and processes influence and shape power relations (Svarstad et al. 2018, p.356). The Chilla *Khadar* waterscape has gone through vast transformations physically and legally. After independence, the Nehru administration invited farmers to grow vegetables to make India self-sufficient. In light of analysing the legality of the farming activity, it is important to note here that the government of India itself demarked the Chilla *Khadar* area for farming. The expansion of the city and better connectivity to East Delhi have shifted the relatively obscure position of the floodplains as a wasteland and have brought it to the centre stage (Baviskar 2020, p.97). Its waterscape was first envisioned as a developed 'Disneyland' like concretised area (DDA 1990), then manicured parks (DDA 2007) and now bio-diversity parks (YMC 2020; DDA 2021, 2020). This transformation is already underway on the opposite bank of Chilla *Khadar* where the South Delhi Biodiversity Park, spread across 200 hectares lies. This park too came in place of small-scale farms. Figure 12 below marks the research area on the map. Here Point A marks the farms on Chilla *Khadar*. Point B marks the South Delhi Bio-diversity Park. The Chilla *Khadar* farms are now being evicted to copy the South Delhi Biodiversity Park waterscape.

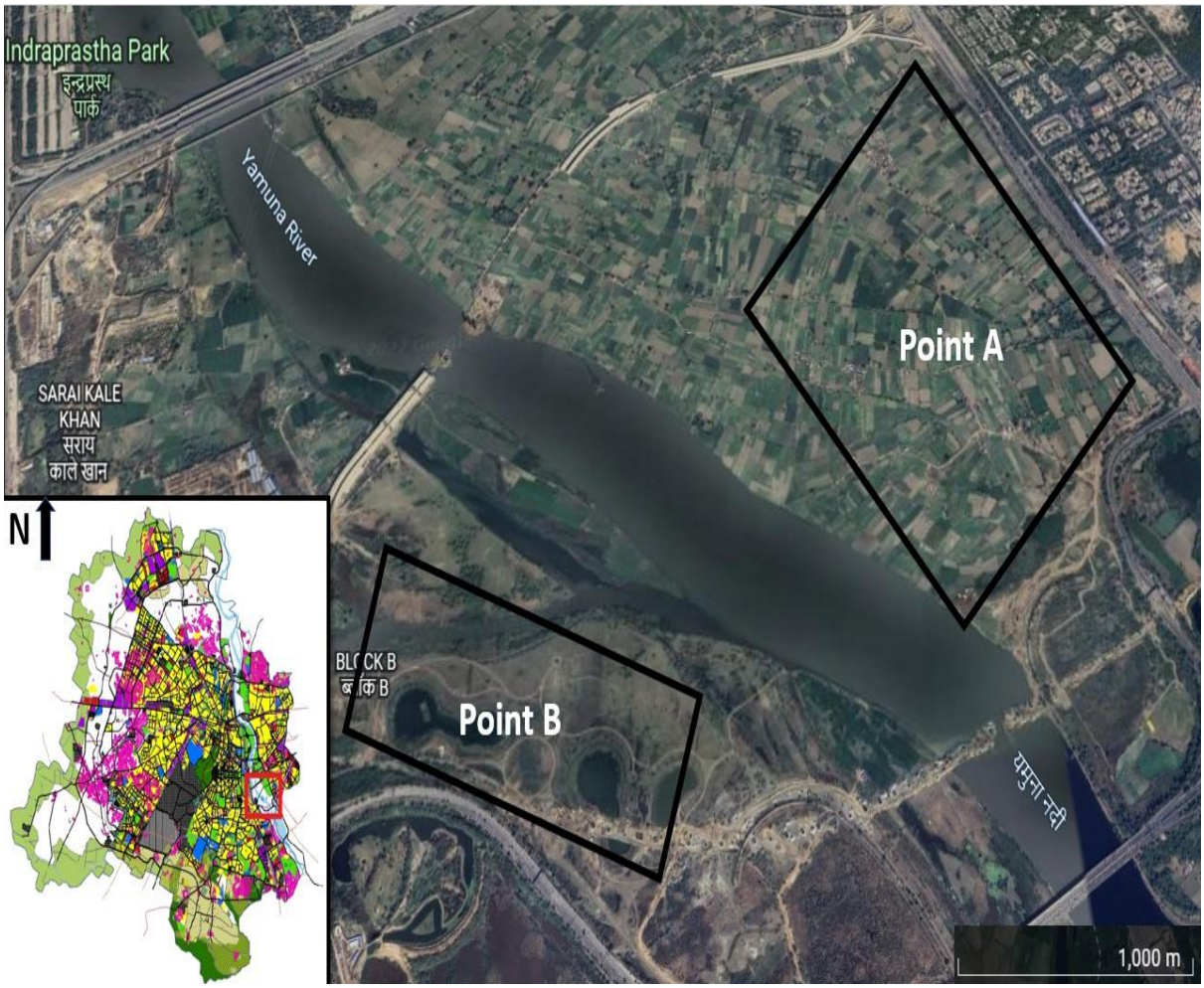


Figure 12. Research area: Point A- Chilla *Khadar* farms, Point B- South Delhi Biodiversity Park.

## *4.3* Farming in Chilla *Khadar*

As a result, broadly classified, the upper-middle class (with social capital), the land-claiming farmers (with economic capital) and the tenant farmers (with no social or financial capital) all make different social categories and fail to be united in demanding socio-ecological justice. Thus, while the contradictions within the farmers are in no way diminished, exploitation continues and a lot of their interests are opposed to each other, they both stand apart from the upper-middle class and are being dispossessed. However, this class dynamic is one of the key aspects missing from the resistance of the farmers that limits it to be truly progressive and anti-capitalistic. Nonetheless, they are progressive in the sense that less powerful tenant farmers too are able to make use of the collective claims of large-scale farmers and continue farming. Moreover, their actions and visions if not break but do

present a challenge to the reproduction of bourgeois environmentalism. Moreover, an analysis of the farmers in Delhi also transcends the urban/rural division. The rejuvenated Yamuna initiative unevenly benefits the upper-middle class at the cost of all farmers. Within this, the tenant farmers will lose proportionally more.

### 4.3.1 Land-claiming farmers

As mentioned in Chapter 3, land-claiming farmers are Gujjars, Jats (numerical majority) and Brahmins (numerical minority) who traditionally carried out farming and fishing occupations in Delhi[18]. The tenant farmers have been described next.

Once a nomadic pastoral community, Gujjars now live a sedentary life due to colonial policies[19] (Dabral and Malik 2004, p.800). They follow caste-related traditions of cattle herding. Jats traditionally owned land and are a cultivating community. Most of them still have a claim on large pieces of land and own several cattle[20]. This has been elaborated on in chapters 5 and 7. While the Green Revolution was a breakthrough that brought a high increase in produce, it did not change the official and legitimate land ownership patterns (Sharma 1972, p.434). Hence, Gujjars/ Jats/ Brahmins continued to hold a claim on almost all the land (Vijay 2016, p.83). They, have an emotional connection with the land, with their societal status joined to it. This has been elaborated on in Chapter 5.

[18] As everyone in this area is officially considered illegal, there are no official surveys done. Thus, this assertion is made through discussion with farmers, housing rights activists, and housing rights lawyers. Judicial documents place 20,000 families in the entire Yamuna floodplain of Delhi. However, within the study area currently, it is approximated that anywhere near 1,000-2,000 families (tenant farmers) live.

[19] Rights being defined in terms of owning land and being tenants started on a large-scale in the colonial era. This then extended to define, classify, and fix various groups and their occupations (Bhattacharya 1996). Bhattacharya (1996) writes about how as Gujjars were a pastoral community, they moved around most of the year with their cattle as opposed to the Jats who owned land and cultivated it. As rights started being defined in terms of owning land, the Gujjars were criminalised and their movement restricted while the Jats were rewarded by being offered police jobs. Thus, the pastoral lifestyle being followed by the Gujjars was systematically pushed into crisis. How this impacts environmental governance now has been elaborated on in Chapter 5.

[20] While keeping buffaloes is banned in Delhi, there are various land-claiming farmers who sell buffalo milk and operate out of the floodplains (*Main bhi Dilli* 2022).

Image 3. Buffalos cooling down on a hot summer day in the river, Image by author, July 2021.

As discussed above, Chilla *Khadar* was one of the regions demarcated for agricultural use by the Nehru administration under the 'Grow more Food' campaign during national food shortages. Through this, expansion, intensification, and commercialization of agriculture were encouraged (Prabhakar and Gadgil 1996, p.183). For this purpose, in 1949, the land was officially leased to the farmers for 90 years. A Delhi Peasants Co-operative was formed by the farmers to deal with the administrative processes and manage the leases. However, after the DDA was formed in 1962, due to disagreement between the new organisation and the Co-operative, the leases lapsed officially. The customary rights of the farmers and fisherfolk were lost in this institutional takeover. The farmer's co-operative weakened substantially also due to power dynamics within the group and its diminished political patronage by the Congress Party[21] (Follmann 2016). However, the farmers continued paying their annual लगान (rent) and collecting receipts from the Co-operative. They have these

[21] Indian National Congress is a pan India 'socialist' political party. Much like most of the country, it dominated the political arena since Independence (1947) to the mid-1970s in Delhi (Vijay 2013, p.609).

receipts as proof of holding their end of the bargain. Government officials too continued being in the know and being bribed. However, now the DDA views the land as government land and the farmers as illegal encroachers (Lal and Pradhan 2019; various court cases[22]). This has moved all farmers and farming activities from the realm of legality to illegality. However, this illegality, much like the illegality of land ownership in the rest of Delhi, is applied arbitrarily. This simultaneously placed farmers within both legality and illegality. In the end, the land-claiming farmers filed cases in the High Court (Allahabad High Court and Delhi High Court as some part of the *Khadar* area falls under Delhi and some under Uttar Pradesh (UP) State), most of which are still ongoing.

Caste unity is seen in both land-claiming and tenant farmers. However, the Gujjars and the Jats, through generations of ties, connections and wealth have moved up on the economic scale. Thus, not all farmers are politically weak and income-poor. While tenant farmers do have minimum representation, the rest have a strong political base enabling them to build executive connections[23]. Gujjars and Jats are considered upper-middle-caste (Vijay 2016, p.81)/ intermediary-caste (Jeffrey 2000, p.1013) and backward-class (Dupont 2004, p.169). They are ethnically diverse in terms of religions, regions, occupations, and social standing.

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[22] Court cases:

The Delhi Peasants co-operative Multipurpose Society Ltd v Delhi Development Authority, High Court of Delhi No. 123/1967 (1967).

Saudan Singh And Ors. v N.D.M.C. And Ors., Supreme Court of India, AIR 1153, 1992 SCR (2) 243 (1992).

Wazirpur Bartan Nirmata Sangh v Union of India And Ors., High Court of Delhi, CM Nos. 10710/2006 and 10711/2006 (2006).

Gainda Ram & Ors v M.C.D. & Ors, High Court of Delhi, (2010).

Abdul Shakeel V DDA, High Court of Delhi, WP (C) 2029/2012 (2012).

Tulsi Ram v Delhi Development Authority, High Court of Delhi, W.P.(C) 1720/2018, CM Nos. 7144/2018, 8852/2018 & 24671/2018 (2018).

Yamuna *Khadar* Slum Union v Delhi Development Authority, High Court of Delhi, WP(C) 10900/2019 (2019).

Preeti Sharma & Anr v Delhi Development Authority, High Court of Delhi, LPA 23/2020 (2020).

Shakil Ahmed & Anr v Delhi Development Authority & Ors, High Court of Delhi, LPA 276/2020 & CM 24633/2020(Stay) (2020).

[23] The Jats politically lobbied to be included in the Other Backward Classes (OBC) category (in certain parts of North India) to get reservation in government jobs. This also shows their changing occupation patterns and moving away from agriculture. This occupation shift can be seen in my own family as I am half Jat (from my mother's side). While my great-grandmother had ancestral agricultural land and herded cattle, the generation after that took up either various non-agrarian businesses or civil service jobs. My generation of immediate family has neither any connection to occupation nor land.

However, they have ethnic affinities with each other. This amicable nature is extended to Brahmins while not being seen completely as part of the community.

As discussed above, land has been steadily taken over by the state for 'development'. Therefore, ancestral lands have now been fragmented and transformed. Thus, this emotional connection and status symbol has been diluting in the younger generations who look at farming as a backward occupation and instead aspire to get urban jobs[24]. Thus, they can be seen moving away from the agricultural occupation. In Chilla, a lot of them still practice farming and animal husbandry, but they often pair it with a government job or a small business. A lot of them have moved to other occupations and leased out their lands.[25] This has been elaborated on in Chapter 5.

This shift has been made possible because living in the city gave the land-claiming farmers a chance of being educated which opens doors to new occupations. While earlier they lived in *Khadar*, as the areas around such as Mayur Vihar and Phadgunj were built, they moved out and were one of the first ones to settle in these areas. Often, they played a huge role in getting these areas liveable by negotiating with the local MLAs (Members of the Legislative Assembly) for provisions of amenities and often themselves putting in sweat and toil to build structures they wanted. Interestingly while they have moved out of *Khadar*, they mostly do not reside in the upper-middle-class colonies and instead live in the urban villages. While the upper-middle-class colonies have better amenities and enjoy a greener spacious area, they still only offer 2–3-bedroom apartments usually. However, in the urban villages, the land-claiming farmers live in 4-story कोठी (bungalows) [26]. These are often unauthorised due to construction and expansion without obtaining proper permissions. However, while their farms are being evicted due to being illegal, their houses maintain a

[24] While maintaining the older caste privileges, the middle classes carved their cultural and political place by being the faces of modernisation. As stated in chapter 1, Joshi (2001) identifies this as being a 'cultural entrepreneur'. Therefore, even though land-claiming farmers have capital, they still are not considered middle-class. This class status is now being aspired for by switching from the primary sector to the tertiary sector.

[25] This practice is commonly referred to as *किरया उगाना* (growing rent). Thus, from growing crops, land-claiming farmers have moved to grow rent, showing upward movement financially.

[26] Delhi's skyline has been low rise due to planning regulations which generally allow a maximum of four stories within a 15-meter restriction. However, this has been changing since the Master Plan Delhi 2021 modification in 2013 due to land shortage.

form of legitimacy and enjoy security. This again shows the arbitrary nature of the legality and illegality of planning in Delhi.

### 4.3.2 Tenant farmers

Tenant farmers are the ones who migrated to Delhi from areas such as Bihar, Uttar Pradesh, Rajasthan, Haryana, Jharkhand, and West Bengal around 25-30 years ago if not more (Figure 13). They lease the land on *पट्टा*(annual leases) from land-claiming farmers.

Most of the tenant farmers work on farms with their families and live there in *कच्चा* (temporary) housing. The labour input costs of the families are not considered (Sharma 1972, p.445). In Chilla *Khadar*, most of the population are Yadav and Maurya (pastoral communities). A handful of मल्ला/ मछली मार/ मांझी (fisher community, numerical and caste-based minority) are also scattered around. While this section focuses on the Yadav and Maurya farmers, the absence of the fisher community will be elaborated on later.

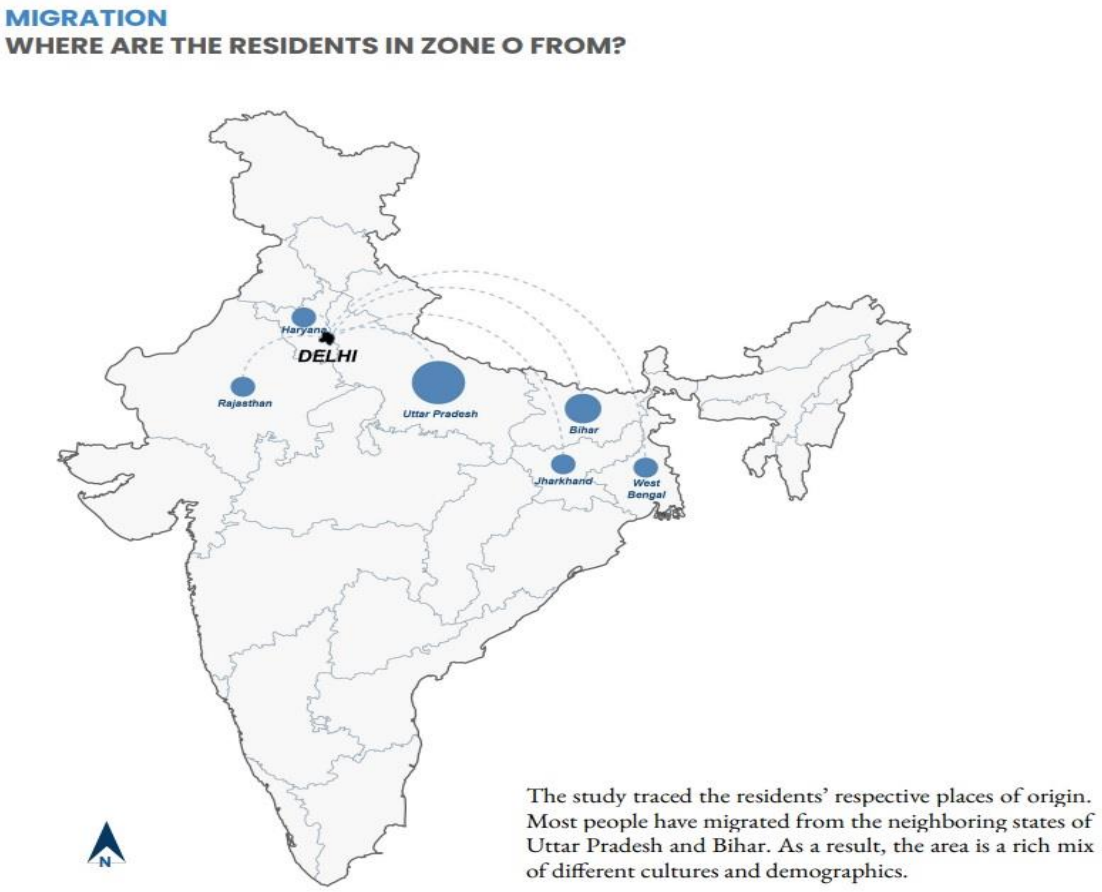



Figure 13. Migration in the Yamuna floodplains, Main Bhi Dilli (2022, p.12).

These farmers are seen by various actors such as the upper-middle-class *Dilliwale,* the judiciary, and the state to embody the village, a space where caste, religion, and gender are still discriminating factors in an otherwise modern, orderly, and rational urban society which has supposedly left these discriminations behind. However, unsurprisingly research showcases how gender, caste, and religious disparities are still prevalent in urban cities (Singh et al. 2021; Islam 2020; Brosius 2010; Baviskar 1999; Alter 1992). On the other hand, modernistic Nehru and Ambedkar reject the village-centric Gandhian development model due to historical disparities in the rural areas (Williams and Mawdsley 2006, p.664). The point is that both urban and rural spaces fail to be the idealistic imaginary they are associated with. The floodplains showcase the hindrance to the aspired urban classist, castist, sexist and religious purity. Therefore, these farmers end up with no space in the apparently otherwise stable city of Delhi and thus become non-citizens. They are associated with poverty and the rural landscape of India, erased from the popular imaginaries of the aspired world-class developed city. In the increasingly class-divided society, they become a problem that needs to be solved.

Overall, marginalisation runs from the bourgeois for all farmers and by the land-claiming farmers for the tenant farmers. Within political negotiations, the tenant farmers are not even acknowledged let alone given a seat at the table by the state, the judiciary and even the land-claiming farmers. Due to these institutional hurdles, the tenant farmers are still stuck in debt. This power dynamic between the land-claiming and tenant farmers will be elaborated further in Chapter 5.

### 4.3.3 Missing voices within Chilla *Khadar*

While the above section unpacks the black box of 'farmers' present in the Yamuna floodplains, it is also important to reflect on who is not present in that analysis. This reflection came through the concepts of visual ethnography and intersectionality. Through visual ethnography, elaborated on in the previous chapter, you not only analyse things in the photo but also things not in the photo and the causes of their absence (Schwartz 1989). Similarly, Kaijser and Kronsell (2014) advocate intersectional research to ask which categories are not present. Thus, the Muslim community and *hijra* community have been

mentioned specifically as while the literature mentions their presence in the area, during the fieldwork visits their absence was marked.

While present, Muslim families were extremely scarce in the area. This was puzzling as the literature on Yamuna *Pushta*, the first large-scale eviction that happened due to the pollution in the Yamuna in 2004, discussed below, mentions the presence of Muslims as the majority group within the area (Baviskar 2020; Bhan 2016; Adve 2004). A reason for this could be the social spatial divide in the layout of Delhi historically being on the based-on factors such as religion and caste (Waldrop 2004). During ethnographic interactions, it was observed that the handful of Muslim families that were present in the area were financially weaker than the Hindu families. This could be due to their limited access to the socio-political ties within Chilla *Khadar*.

Another section of the population missing from the Chilla *Khadar* was the *hijra* community. While being swept into the LGBT identity banner as transgender/intersex, the community continues to identify themselves as *hijra* (Kole 2007). The group has an Indian gender category which is neither male nor female (Nanda 1990). They were constitutionally recognised as the 'third gender' in 2014 (Pavri 2018). Puri (2010) and other scholars[27] locate members of the *hijra* community in the floodplains of the Yamuna. The community while being present in the Yamuna floodplains might have not been present in Chilla *Khadar* due to its dominant agricultural occupation and *कच्ची*(temporary) housing. A reason for this might be due to farming not being the main occupation of the *hijra* community due to various structural socio-political reasons.

### 4.3.4 Farming in floodplains as a problem

As can be seen, farming on the floodplains has been institutionalised in various ways since the Independence of India (1947). In 2015 the National Green Tribunal banned farming on the floodplains citing health degradation due to the consumption of vegetables grown in the area. Now in 2021 under the (Draft) Master Plan Delhi 2041 for the first-time farming on the floodplains is explicitly allowed by mentioning that "*specific locations may be identified for*

[27] To maintain ethics of safety and privacy the exact location of the research cannot be mentioned. As the published article contains unmarked maps, specific information is not exposed. This step has been taken after permission from the author.

*permitting agriculture in the flood plains*" (DDA 2021, p.20). However, evictions continue, and the farmers are still criminalised. Both the problems and solutions are heavily laden with meaning (Bacchi 2012, p.23). The complexities within the contradiction of the ban on farming through judicial judgements and its possible legalization through state planning need to be examined.

Currently, while solely farmers are shouldered with the blame for using chemical agents, the half-century of institutional policies causing the current agricultural practice and ecological crisis is ignored. In India, it was mostly the government that pushed the Green Revolution in the 1960s in the Ganga basin for food self-sufficiency (Singh et al. 2021, p.5). However, the use of chemical agents was not completely accepted or rejected by all farmers in India. Various counts of ideology, vision, and politics were at play (Kapoor 2016, p.586). Therefore, its spread cannot be attributed to the state alone (Guha and Martínez-Alier 1997, p.123).

Most of these establishments operate in an informal, semi-legal manner as no clear guidelines or legal structures are available to regulate them. Interestingly, the agricultural system is both centralised and decentralised. It is decentralised as it is not controlled by corporate megafarms or the state. However, there is a threat of farming along with fishing being centralised and will this be discussed below. Currently, policies dictate crop patterns (Singh et al. 2021, p.3). While the farmers are free to grow whatever crops they like, they have resorted to growing crops with a small cycle of 2-3 months due to the threat of eviction instead of planning to use the land long-term. Therefore, some farmers resort to using more chemical fertilisers for more yield and their overall care of the land and water bodies decreases. Non-availability of organic seeds is also a factor recognised by the farmers to stick to seeds that require more chemical fertilizers for productivity. Thus, it is these policies that push the use of fertilisers due to their exclusionary nature thus creating the problem.

Nonetheless, there are multiple official policies, documents and reports that discuss farming in floodplains and contribute to producing the planned waterscape of the Yamuna floodplains in Delhi[28]. As discussed in chapter 3, these documents are not produced in a

[28] Some of the other state and judicial documents promote farming on the floodplains are the Union Budget Speech (2022), River Rejuvenation Committee (2020), and Expert Committee Report (2015, 2014).

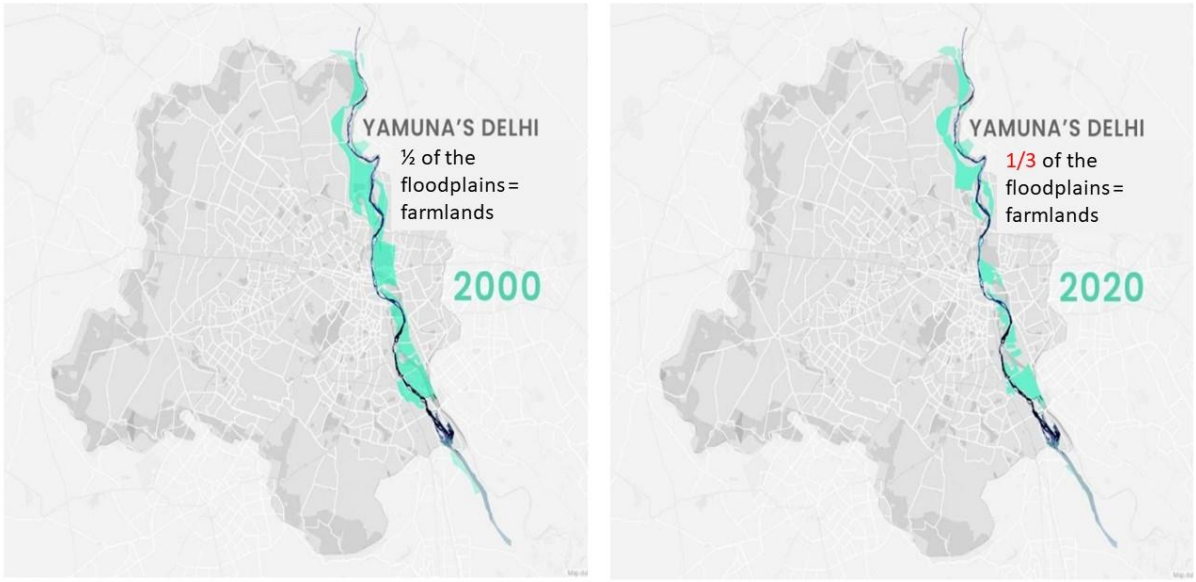
vacuum and interact with each other impacting the socio-physical layout of the city. They paint diverse pictures and hence produce ambiguity and flexibility. However, the arbitrary nature of implementing policies gives stark clues about priorities, importance, and value. Therefore, this section aims to understand the overall top-down governance of Yamuna floodplains in Delhi leading to the implementation of the ban on farming. This will be used to identify a pattern of exclusion within ecological planning. Chapter 7 will then trace various steps of resistance taken by the farmers within this ambiguity.

The complexity of banning farming on the floodplain can be seen by analysing the justification behind it. Here it is important to note that the actual Yamuna Matter petition (2012)[29] was to remove encroachment of big polluters such as sand mafia and dumping of construction waste. However, these big polluters were grouped with small-scale farming by both the NGT and the state (*Namami Gange* and NUIA 2020, p.36). Equating the large-scale irreversible pollution caused by sand mining with small-scale agriculture itself shows the inequitable policies produced in the rejuvenation initiatives. This is a common pattern where large-scale exploitation by powerful actors is grouped with the marginalised earning a living (Rangarajan 1996, p.2394).

Due to this, large-scale eviction drives are taking place in the Yamuna floodplains, the extent of which can be gauged by the fact that while the Expert Committee Report (2014) mapped 4,135 Ha under farming the YMC (2020) places it at a mere 954 Ha. Moreover, it advises the Delhi Development Authority (DDA) to seek help from the local police to empty the area completely stating that "*without a plan, the agriculturists will only get more strength to ward off reclamation efforts whenever these are mounted*" [30]. Figure 14 below depicts the disappearance of farmlands in the Yamuna floodplains of Delhi (Zone O).

[29] National Green Tribunal (2012) *Manoj Mishra v. Union of India*, *Government of India O.A.,* R.A. No. 15/2021 in O.A. No. 06/2012.

[30] National Green Tribunal (2020) *Manoj Mishra v Union of India &Ors.*, O.A. No. 6/2012 A.




Maps: Extent of farmlands on Yamuna floodplains in Delhi in 2000 (left) and 2020 (right)
Source: Social Design Collaborative

Figure 14. Disappearing farmlands in the Yamuna floodplains, adapted from *Main bhi Dilli* (2020).

The socio-ecology of tagging the farmers as polluters and banning farming needs to be seen in comparison to various environmentally degrading development plans being legalized on the floodplains by the state and the judiciary. This contextualizes the disproportionate and inequitable dispossession of the farmers. The purposeful criminalization of farmers and farming through flexible planning is contextualised in the next section.

## 4.4 Developing the floodplains

While the above section unpacks the political ecology of farming in Chilla *Khadar*, this section contextualises its illegality by comparing it with the legality of concretised structures on the floodplains. This extends the analysis of exclusion within ecological planning by practising flexibility.

What environmental official programs (by the state and the judiciary) are implemented and how depends on various factors such as legality, illegality, and legitimacy of people, occupation, and housing. The farmers are continuously constructed through everyday practices. The process of contestation, negotiation and collaboration among various actors makes the environmental programs historically specific. The resistance against the hegemonic order and power involves a cultural struggle (Gupta 1995, p.394). To understand

these cultural struggles, we need to identify how social relations are 'done'. When looked at through the political ecology lens, the Yamuna waterscape forms a 'cultural landscape' (Sauer 1963) due to the power relations that produce it (Heynen et al. 2006, p.10). Therefore, the interwoven knots of power relations operating at various scales inherent in the urban landscape cannot be divorced. The section below analyses these power relations producing and banning the farming activities in the Yamuna floodplains through the discourses of legality, illegality, and legitimacy.

As discussed above, the large-scale spatial changes for the creation of bio-diversity parks being seen in the Yamuna floodplains are due to the planning and judicial mandates in a complicated interwoven manner. While this section deals with the tool of planning used by the Delhi Development Authority, the next section deals with the judgements of the National Green Tribunal and how the waterscape of the floodplains has a history of being dictated in a socio-ecologically inequitable manner.

### 4.4.1 Planning the floodplains

Environmental planning in Delhi often results in 'planned illegalities' which cause dispossession (Bhan 2016). These are dictated by the Master Plan documents of the city. This section first traces the historical socio-spatial inequalities embedded within the past Master Plans in the case of the Yamuna and then analyses the latest Master Plan document through the political ecology framework to unpack their 'planned illegalities'.

It is necessary to look at how the urban systems within which the rejuvenated Yamuna initiative is developed characterise and shape it. Bio-diversity parks are created in spaces with ongoing socio-political complexities. Understood through bourgeois environmentalism, these get appropriated into neoliberal planning physically and discursively leading to social exclusion (Kotsila et al. 2020, p.5). This is termed 'green stealth' by Scott et al. (2016).

In Delhi, the Delhi Development Authority (DDA)[31] makes the Master Plans which are citywide policies. To understand how bio-diversity parks are implemented within planning, these have to be analysed. Basically, anything in violation of the Master Plan is considered illegal. However, Bhan (2016, p.133) calls the legal and illegal categories of planning

[31] Plans have been prepared roughly every 20 years since 1962. It reports to Delhi's Lt Governor and not to an elected body.

'foundationalist fiction'. On the ground, the city expands and runs not according to rigid planning but via complicated interactions among multiple stakeholders. Plans rather represent the spatial desires of various groups. Hameed (2017, p.119) calls this erasing of what is considered unimportant by the planners 'unmapping'. This practice reframes participation to be limited as a tool to assert and 'reclaim' control over land, people, occupations, and resources. Uneven urban geographies are thus made and remade (Gururani 2013, p.138). As a result, the Master Plan is practised selectively to spatially manifest power. Ghertner (2010) further studies forms of deliberate ignorance for selective socio-spatial productions through 'aesthetic governmentality' in line with bourgeois environmentalism. Bhan (2016, p.21) states that "it is planning itself that produces and regulates illegality". This spatial mode of governance produces 'calculated informality' (Roy 2005). Thus, both strategic knowledge and ignorance production along with illegibility in shaping various governmentalities need to be analysed by taking note of complex discursive, material and situated effects of entanglements (Truelove 2018).

The analyses of the Yamuna Pushta demolition (2004) and closure of factories in Delhi, showcase this class-based 'unmapping' (Hameed 2017) and 'calculated informality' (Roy 2005) relating to the displacement and dispossession caused due to Yamuna pollution. However, Follmann (2016, 2015, 2014) problematises the clear class distinction by looking at events such as protests against the Commonwealth Games Village and the Akshardham Temple. This 'aesthetic governmentality' (Ghertner 2010) is elaborated on below. Yamuna Pushta, a settlement housing around 1,00,000 people, spread around 100 acres on both banks of the Yamuna and stretched for a kilometre was demolished (Bhan 2016; Ghertner 2011; Menon-Sen 2010; Padhi 2007; Mehra and Batra 2006; Baviskar 2006). Moreover, in the 1990s and the 2000s, a series of court orders resulted in the closure of around 98,000 factory units and around 2 million workers lost their jobs (Baviskar 2019; Aggarwal 2015). Both these incidents took place citing zoning laws as mentioned within the Master Plan. A similar pattern can be seen now for the creation of bio-diversity parks and has been elaborated on in the next section. Through these incidents, the Yamuna *Pushta* residents and the factory workers were criminalized as 'illegitimate', 'dirty', 'polluters', 'free-loaders', 'encroachers', 'uncooperative', 'uneducated', 'petty', and 'non-citizens' (Baviskar 2020; Bhan 2016; Follmann 2016; Karpouzoglou and Zimmer 2016). This is understood through the

concept of 'differentiated citizenship' where inequality is justified (Holston 2009). On the other hand, Bhan (2016, p.172) points to how the upper-middle-class tagged itself as the 'sufferer'. This shows how it is not just the society that creates nature but also how society is created through environmental discourse. This criminalization of farmers in the Chilla *Khadar* area will be elaborated on in Chapter 5.

In comparison, the legalisation of the state's own illegality needs to be analysed. The DDA has a track record of violating its own Master Plan following flexible, informal, and piecemeal development. As stated in Chapter 1, while only around 50% of the city is authorised (formal, legal, planned, and legitimate) most do not face the threat of evictions (Karpouzoglou and Zimmer 2016; Bhan 2016). Greenwashing of projects accompanied by land-use changes enables the state to break its own mandates to accommodate modern projects to achieve its 'world-class' city aspiration. Within the Chilla *Khadar* area, this can be seen through the construction of the Commonwealth Games Village and the Akshardham Temple which came at the expense of the marginalised. The Akshardham Temple (90 acres) constructed in 2005 (Follmann 2014; Srivastava 2009) and the Commonwealth Games Village (157 acres) constructed in 2010 (Baviskar 2020; Follmann 2016, 2015; Colopy 2012) on the floodplains are two concretized projects. Both structures were constructed after the eviction of the poor and serve upper-middle-class *Dilliwale*. Much like Yamuna Pushta and small-scale factories discussed above, these structures sat outside the land use plan of Delhi. However, while both the land-claiming farmers and mainstream environmentalists protested against their construction on the ecologically sensitive floodplains, they were given legal status by the judiciary after the land use plans were changed to accommodate them. How this resistance was attributed to both human and non-human factors has been elaborated on in Chapter 7. Here the environmental paradox becomes clear as while settlements from the floodplains were evicted citing environmental reasons, these environmentally degrading concretized structures took their place (Srivastava 2009, p.339). Similar patterns can be seen within the creation of bio-diversity parks and have been elaborated on in the next section.

Thus, it is important to analyse the power dynamics of legalising and criminalising places, people, and occupations on an ad hoc basis. The next section outlines this by exploring the latest (Draft) Master Plan document.

### 4.4.2 (Draft) Master Plan Delhi 2041

The (Draft) Master Plan Delhi 2041 (DMPD-41) (DDA 2021)[32] has been focused on as it dictates the future waterscape of the city revealing the environmental imaginary being produced. Zone O (9,700 ha) marks the river and its floodplains on the Map. Under the DMPD-41, this area has been divided into Zone O-I and O-II. O-I River Zone is an active floodplain with a total area of 6295.00 Hectares and the O-II Riverfront is regulated with an area of 3638.36 Hectares. In the O-I River Zone, the Yamuna flows through 1,146 ha and 1,267 ha will be turned into 10 biodiversity parks (DDA 2020). The rest of the land has been transferred by the DDA to other agencies and some land remains under litigation.

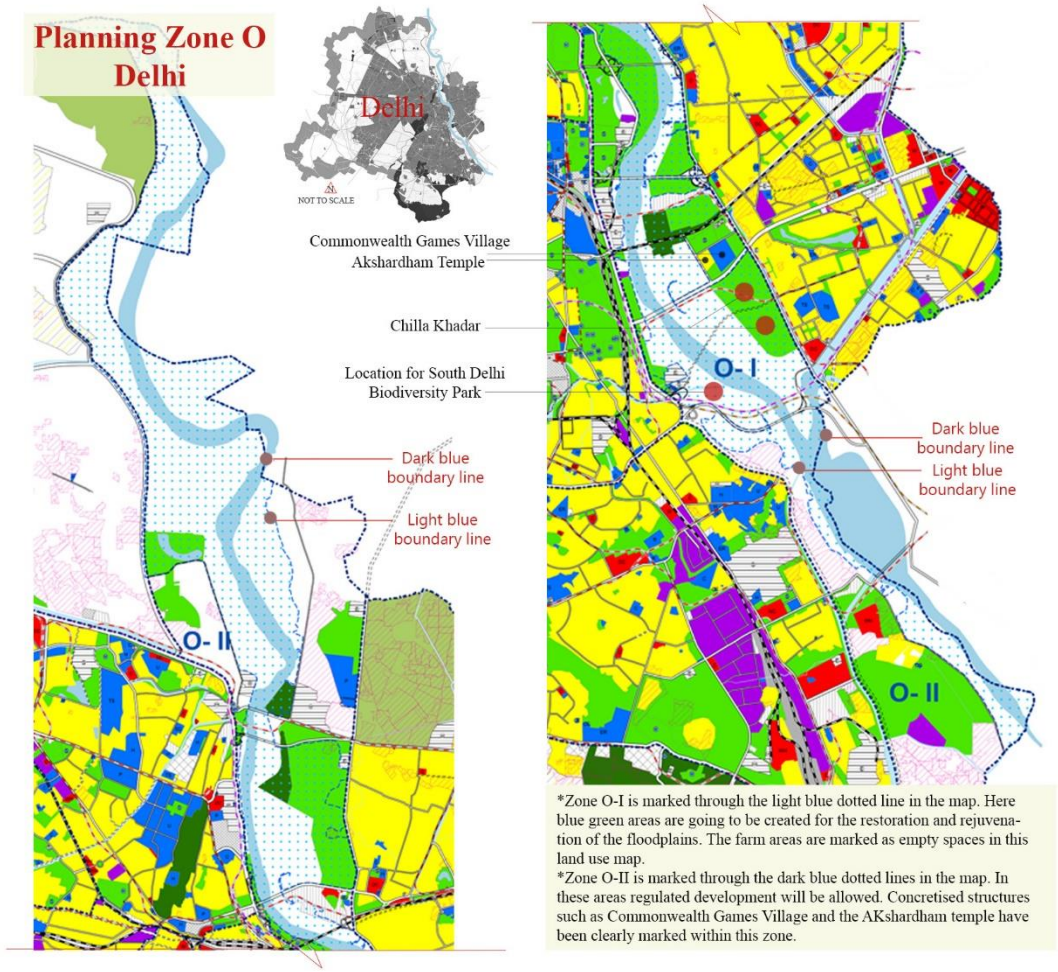



Figure 15. Draft MPD-41 Zone O map by DDA 2021, Source: Google, extracted by Maddile (2023).

[32] Notified by the DDA on 9th June 2021. Reviewed and approved on 28th February 2023 by the Lieutenant Governor of Delhi.

On the map in Figure 15, there are two important things. One is the light blue line demarcating the O-I zone. The second is the dark blue line demarcating the O-II zone. These have been highlighted within the research area in the map for ease of viewing. The division between the O-I and O-II zones is important to notice. While within the consolidated Zone O in all the previous Master Plans (MPD-1981 (DDA 1962); MPD-2001 (DDA 1990); MPD-2021 (DDA 2007)), no construction was allowed within the entire area, now within the O-II zone regulated development will be allowed. This starkly reveals how flexibility in planning produces calculated informality. Enclosed within the O-I zone are blue and green areas, which are going to be used for the restoration and rejuvenation of the floodplains. Enclosed within Zone O-II are various structures discussed above such as the Commonwealth Games Village and the Akshardham Temple (marked on the map). These structures fell under the consolidated Zone O earlier. By dividing Zone O into O- I and O- II, these buildings have been surgically removed from the blue-green area, moving them to the realm of legality. The farm area in Chilla *Khadar* (marked in the map) on the other hand has just not been deliberately left in the O-I zone but has been marked as an empty space. This exclusionary planning in the floodplains for the creation of bio-diversity parks has been elaborated on below. Moreover, as stated above, the Plan mentions in ambiguous terms that "*specific locations may be identified for permitting agriculture in the flood plains*" (DDA 2021, p.20). Here it is important to notice that the Plan also promotes "private sector-led development through joint action of various stakeholders (pooling, amalgamation, joint planning and execution) … [where]… *regeneration of older brownfield areas shall be implemented through private initiative*" (DDA 2021, p.11) (emphasis added). Therefore, the possibility of the current farmers being evicted, and instead big private players being invited for the 'regeneration' of the area must be considered.

While planning by the state can be recognised as one of the most important tools of city building, power varies across strands of law, diplomacy, expertise, advocacy, and framing. Thus, the state is both the subject/object, decentred/recentred within environmental regimes. No actor remains within a single institutionalised strand. Rather they navigate across them. Thus, rules both legitimize and delegitimize state actions. Actors operate within complex, fluid, heterogeneous, multi-sourced and contradictory embedded rules

(Conca 2005). This complexity has been explored below by analysing how these planning mandates interact with first the judiciary and then the environmentalists.

### 4.4.3 Judicial institutionalisation of environmentalism

In a circumstance where the monopolistic state was performing poorly in environmental matters, political legitimacy flowed to alternative actors (Bratton 2012, p.237) such as the 'guardian angel of the society' through the establishment of the National Green Tribunal (Negi 2011, p.183) mentioned in Chapter 3. The judiciary was supposed to fill the vacuum of governance left by the executive (Rajamani 2007, p.294). It should be noted that the creation of the NGT was not imposed on the judiciary, such as the global trends, but was explicitly requested by the Supreme Court. Since the establishment, the growing number of cases being heard by the court shows the faith of the people in the NGT (Shrotria 2015). However, tension exists between the NGT and the executive. The NGT has been accused of overstepping its boundaries and being power-hungry by the government in the Supreme Court (Shrotria 2015, p.186). The active environmental participation by the judiciary has brought about the large-scale rapid reordering of the socio-physical fibre of Delhi.

The reason for this active participation was the argument that while almost all nations have environmental laws in place, there is a huge gap between on-paper law and on-ground implementation. Thus, judicial activism comes as a response to the limited effectiveness of political and administrative authorities. However, Negi (2011) states that the gap between law and enforcement is conceptualized as a technical matter. Instead, while the state is able to remain inactive in a range of judgments, it ruthlessly implements selected judgments. As a result, the gap is not technical but political (Negi 2011, p.190). Therefore, the rejuvenated Yamuna Initiative needs to be politicised.

Courts are able to make a limited impact as they usually end up fragmenting movements and fail to include multiple voices and mass mobilization. A judicial victory might not mean effective policy implementation or genuine social change. The judiciary, while being powerful remains one in a complex mix (McCann 2006). Vasan (2021, p.153) states that the NGT is a performative space with the power of producing environmentalists. The discursive element of the court demands the involved parties to perform their environmentality. Environmentalism then becomes a cultural element produced in the judiciary as a meaning-

making practice becoming a distinct form of social communication. It bounds the involved parties into certain narratives. Environmentalism then becomes a required currency created by the NGT to enter the space of negotiation (Vasan 2021). Thus, the NGT presents a moment of institutionalized mainstreaming and depoliticisation of the environmental narrative (Vasan 2021, p.163). How this impacts the resistance of the farmers will be elaborated on in Chapter 7.

These institutionalised factors can be seen playing out by looking at who it considers to be knowledgeable within judicial environmental governance. As stated in Chapter 3, to examine various issues related to the pollution in the river in a more holistic manner, the NGT directed the Ministry of Environment and Forests to constitute various expert committees such as the Yamuna Monitoring Committee. The politics of knowledge can be starkly seen here as these expert teams fail to include the farmers and their tactical knowledge[33]. Tactical knowledge is informal undocumented knowledge (Drescher et al. 2013). This is context-specific, direct, based on experience, and has a personal quality (Boiral 2002, p.296). When this knowledge is considered at a communal level it becomes collective knowledge. The institutionalized and tactical knowledges are not to be viewed as a dichotomy but as a spectrum (Inkpen and Dinur 1998, p.456). Not considering it so unequally empowers a single vision of environmental imaginary and knowledge (Negi 2011), as discussed in chapter 2. However, within the NGT, knowing about the environment is a privilege given to only some groups. When actions stem from bourgeois environmentalism, these factors are not recognised. The epistemological impact of this will be elaborated on in Chapter 6 and how this shapes the resistance of the farmers will be elaborated on in Chapter 7.

Due to these factors, evictions are ordered for the restoration and rejuvenation of the floodplains in the NGT. While the High Court put a stay on the order in 2019[34], the NGT made it clear that the 'encroachers' were not entitled to any prior notice and that its orders

[33] This politics of knowledge is also seen in the DDA Annual Report 2019-20 which claims that wetland experts are being used for the sound ecological creation of the wetlands without considering the inputs from farmers.

[34] Yamuna *Khadar* Slum Union v Delhi Development Authority & ors, High Court 2019

could only be challenged before the Supreme Court[35]. Therefore, the cost paid by the marginalised is not just ignored by the judiciary but their fight for their rights is seen as vote bank politics. The NGT is not designed to address displacement, housing, livelihood, and equity questions. In the same way, the High Court is not designed to hinder ecological judgements by the NGT. Through its technical mandate, it projects an apoliticisation of ecology eliminating questions of politics and power. However, this leaves out the needs of the marginalised making the process undemocratic.

It is the interaction of the planning processes discussed above and these judicial elements that embed narratives criminalising the farmers as discussed above in everyday language producing differential citizenship. These judicial and planning restrictions on the farmers being a part of the environmental discourse have been elaborated on in chapter 7. Thus, the judiciary can also be seen working in a bourgeoise way.

### 4.4.4 Resistance of development

After discussing how environmental policies are shaped by the state and the judiciary, this section explores the resistance to the various ad hoc constructions mentioned above by environmentalists. Follmann (2016, 2015, 2014) distinguishes the environmentalists in the case of the eviction of Pushta and factories where beautification instead of socio-ecologically sustainable plans were promoted, from the cases of Akshardham Temple and the Commonwealth Games Village, where the environmentalists protested against the construction of these structures falling in line with the agenda of making the city world-class. In the first case, Baviskar (2020, p.125) identifies bourgeoise environmentalists (English-speaking, upper-caste, white-collared professionals) demanding beautification and aspiring for a world-class city. Follmann (2016, 2015, 2014) on the other hand in the second case identifies Environmental Non-Governmental Organisations (ENGOs) who opposed symbols of a world-class city due to being environmentally degrading. Through this, Follmann (2016, 2015, 2014) broadly distinguishes the institutionalised state and judicial environmentalism from that of the ENGOs. Moreover, in the second case, the structures were opposed by ENGOs in collaboration with the farmers. This differentiation broke the class-based binary of bourgeois environmentalism. However, Follmann (2016) argues that

[35] Delhi Development Authority & ors v Yamuna *Khadar* Slum Union, NGT 2020

while the ENGOs did join hands with the farmers, due to their class dominance, the overall dichotomy between bourgeois environmentalism and the environmentalism of the dispossessed was not broken down completely. This is because while the ENGOs are sympathetic to the plight of the farmers, they still narrowly present their arguments to strengthen their own demands. This can be seen in the current creation of bio-diversity parks too. This is because, within the institutional structure, ENGO voices are heard more when they engage with concerns about pollution without sticking to arguments about social disparities. In other words, they are more successful when they perform their environmentality in an apolitical fashion within the institutional structures of the NGT. Thus, the component of intersectionality is missing from the ENGO discourse (Priya et al. 2017, p.10).

While the dualist class-based narratives in Delhi have been problematised by Follmann (2015), the highly uneven and differentiated political ecologies need to be further explored. Masco (2011) notes that there is a vast diversity of groups that claim the title of environmentalists. This thesis focuses on how farmers in the floodplains of Delhi continue to seek access to negotiating spaces through various means to advance their claims and resist exclusionary impacts. As stated above, Vasan (2021, p.153) recognises the NGT as a performative space where one, only groups with an environmental identity gain entrance and two, an environmental identity is produced. Thus, it has become the only acceptable currency to enter the environmental discourse currently. This is the reason why identifying the diversity of voices in the environmental discourse becomes important and will be elaborated on in Chapter 7.

By challenging the clear class differentiation, sweeping generalisation about bourgeois environmentalism not engaging with 'non-modern' actors such as the farmers and only working towards creating a 'world-class' city imaginary is problematised. The explanatory limits of the bourgeois environmentalism theory are identified (Mawdsley 2004). Through this identification of the theoretical gap, space to explore other complex environmentalisms of various actors is opened. This realisation acknowledges the diversity of environmental activism through a wide spectrum of approaches due to multiple motivations in the urban space. As stated in Chapter 1, this thesis by analysing the environmentalism of the farmers widens this theoretical understanding by breaking the binaries of environmentalisms of the

bourgeois and the dispossessed to include the multiplicity of trade-offs, power dynamics, values, and principles by multiple actors. While this situated analysis stays limited to one such actor, future research can widen this theoretical understanding even further by assessing the multiplicity of environmentalisms by multiple environmental actors at various spatial-temporal scales and levels.

## 4.5 Development to Rejuvenation

Due to the resistance of concretised structures by the ENGOs and farmers, the floodplains were now to be rejuvenated and not developed. The important thing here is that within these transformations, politico-legal power is applied to first reclassify land rich in socio-ecological traits as 'barren', and 'wilderness' and then as 'restored' and 'rejuvenated' through enclosing it.

While the floodplains have been used for aesthetic purposes historically, the prime example being the Taj Mahal along the Yamuna in Agra[36], the extremely limited open common space in the urban areas makes it vital to stop any permanent construction on the floodplains now. However, all cities in the Ganga basin with a population upward of 1 lakh will now have to make an Urban Riverfront Master Plan (*Namami Gange* and NIUA 2020). For this, currently, the environmental imaginary of the Sabarmati riverfront model is being copied throughout India in areas such as Maharashtra, Patna, Rajasthan, and Lucknow (*Namami Gange* 2021, p.18). This is a prestigious mega riverfront development project parts of which started opening in 2011 (Pessina 2018; Follmann 2015). It evicted approximately 40,000 poor households and was aimed at 'reclaiming' and 'developing' 11 kilometres of both sides of the Sabarmati River in Ahmedabad through grey- infrastructure (*Namami Gange* 2021; Jesani 2018). It has been predicted to cause overall destruction of the river as an ecosystem due to causing soil erosion, health risks, and flood risks (Thakkar 2019; Pessina 2018). Thus, it is criticized by both environmentalists and housing rights groups (Pessina 2018). However, it is still celebrated by the state and is now a favourite location for state photo ops in Gujarat.

[36] The signature white Taj Mahal marble has been decaying due to the toxic gasses emitted by the polluted Yamuna River (Singh et al. 2022).

Delhi too has tried to develop its floodplain similarly in the past to resemble something like the imaginary of the Thames (Baviskar 2020, p.165) or Disneyland (DDA 1990) as discussed above. While various concretised structures have been successfully built, a large-scale attempt to re-envision the floodplains as a developed riverfront was stopped by the NGT after its Expert Committee (2014, p.41) stated that "*The scheme did not take into account the present topographical features, contours and flood ways. Therefore, it is schematic and is far from ground reality*". The riverfront had been envisioned the space was to be used for,

> *"*recreational facilities which will include district parks in continuity with vast green spaces, water sports, golf course, tourist cottages, camping sites with public convenience, small shopping plaza, pleasure parks for different age groups, children parks, auditorium, restaurants/café, amusement/antique hall sports Centres, boat club with paddle boats, facilities of swimming with dress changing facilities, gymnastic, skating, rest rooms, etc., parking facilities for different types of vehicles, dispensary, bird sanctuary, race course, science park with reception office, public conveniences, stores, exhibit development, solar energy corner and other service models, amusement park, fun island, children's airport with facilities of helicopter, mini forests, green preservations along bunds, horse riding/training centre and temple complexes, etc" (*Expert Committee (2014, p.39).*

As discussed, now the floodplains are being rejuvenated through the creation of bio-diversity parks and not developed. Thus, one, Delhi has now become a unique departure from the riverfront development trend in India. Moreover, these rejuvenation plans claim to have a more active element of facilitating "*citizens and stakeholder groups… to play a role in the protection and improvement of green-blue assets and develop community ownership and responsibility towards these shared resources and urban commons*" (DDA 2021, p.24)[37].

Two, this was the result of resistance to the development project by the environmentalists as the world-class-city environmental imagery was stopped (Follmann 2016). This again problematizes the class-based dichotomy created by bourgeois environmentalism. Moreover, the judiciary has made valuable contributions in protecting the floodplains from concretisation by identifying problems, recognising responsible stakeholders, and pressuring powerful stakeholders into action. However, they have limited power and have failed to

[37] This has also been advocated for by YMC (2020), *Namami Gange* (2020), *Namami Gange* & NUIA (2021).

stop the construction of Akshardham, the Commonwealth Games Village and the Cultural Festival due to their political backing as discussed above. This establishes a track record of the DDA in breaking NGT mandates.

As discussed in chapter 2, the rejuvenated Yamuna initiative still follows the apolitical conservationist principles of the nature/culture dichotomy and works within the inequitably tilted governance structures. This has multiple political and social consequences globally. Here, similar to the previous riverfront development plans, a problem framing of limited resources and farmers exploiting the river is used to justify their evictions. Consequentially, all humans are pitted against all nature. This neo-Malthusian view of assigning natural degradation to the farmers for farming right at the edge of the water channel is debatable. Christoff (2005) calls this Malthusian scarcity prioritising ecological values at the expense of social values and human rights as 'eco-fascism'. Katz (1998) intricately links the neo-Malthusian view to the concepts of preservation and conservation. Political ecology recognises that the linear Malthusian concept of demonising the poor and recognising overpopulation as the prime cause of environmental degradation is limited due to their conceptualisation independent of time and place creating various binaries (Zimmer et al. 2020, Jarosz 2004, Peet and Watts 2004). Attention is not paid to non-linear power, politics, and violence. This apolitical Malthusianism militarised command and control remains one of the typical ways of environmental thinking in conservation (Robbins 2019).

Thus, there is a need to problematise this shift of development to rejuvenation through the political ecology framework. This thesis unpacks these debates and claims that these plans fail to engage with the social. Thus, they continue to serve specific publics over others, perpetuate social inequalities, and tokenize the larger socio-ecological issues. This creation, maintenance, and reproduction of benefits for some and burdens for others (Wijsman and Berb´es-Blazquez 2022) will be analysed through the three research questions in the forthcoming chapters.

### 4.5.1 Bio-diversity Park plans

As mentioned above, plans for the restoration and rejuvenation of the floodplains can be identified to create what Chatterjee (2006) calls a utopic homogeneous imaginary. He contradicts this from Foucault's (1984) heterotopia meaning 'place of otherness'. In other

words, utopias function as fantasies while heterotopias are places that exist. The appearance of the produced homogenous and natural environment of the garden city on the surface appears to have no sign of the messy social realities that produced it and were erased (Ghertner 2011, p.289). However, this section through analysing the South Delhi bio-diversity Park brings alive the historical aspect of the floodplains and moves it from being a non-place to a 'cultural landscape'.

Figure 16 below maps the almost complete construction of the South Delhi Biodiversity Park (200 ha) (YMC 2020) after the eviction of farms in the area. The Waterscape comprised of small-scale farms (left panel, 2011) has been removed completely to produce bio-diversity park waterscape (right panel, 2022). This prototype is going to be copied throughout Delhi and then wider in India. Along with the bio-diversity park, this area is also seeing the construction of an ecologically degrading Delhi to Meerut semi-high-speed rail or Regional Rapid Transit System (RRTS). These transformations from farms to bio-diversity parks and then large-scale construction have been analysed below.


Figure 16. Satellite image showing the South Delhi Biodiversity Park created after evicting farms, World imagery map: Left panel 2010, right panel 2023, extracted in June 2023)

The historical pattern of power dynamics remodelling the floodplains for the consumption of the upper-middle-class by erasing the farmers is starkly seen here. In 2016 an event called the 'World Cultural Festival' was held in the area by the Art of Living Foundation (AOL) under the self-acclaimed Godman Sri Sri Ravi Shankar. The DDA took over the land as soon as the event ended and erected barriers (Alley et al. 2018). Meanwhile, the NGT fined the organisation for causing irreversible ecological damage to the area (Manoj Misra v. Delhi Development Authority & Ors, 2017). To combat the odour coming off the Barahpulla drain nearby, the AOL foundation had dropped bacterial agents into the sewage flow. This brought up the Biological Oxygen Demand (BOD) level of the sewage, violating multiple wastewater regulations. Here again, by protesting against the event, it is seen that mainstream environmentalists while still solely focusing on nature, do not just promote the 'world-class' imaginary. According to Sri Sri Ravi Shankar, the event was a "*cultural Olympics*", and the payment was made as "*development compensation. A development fee for a biodiversity park*" (Hindustan Times 2016). This fine has been used for plantations in the area and a section has been named after the organisation (Figure 17).

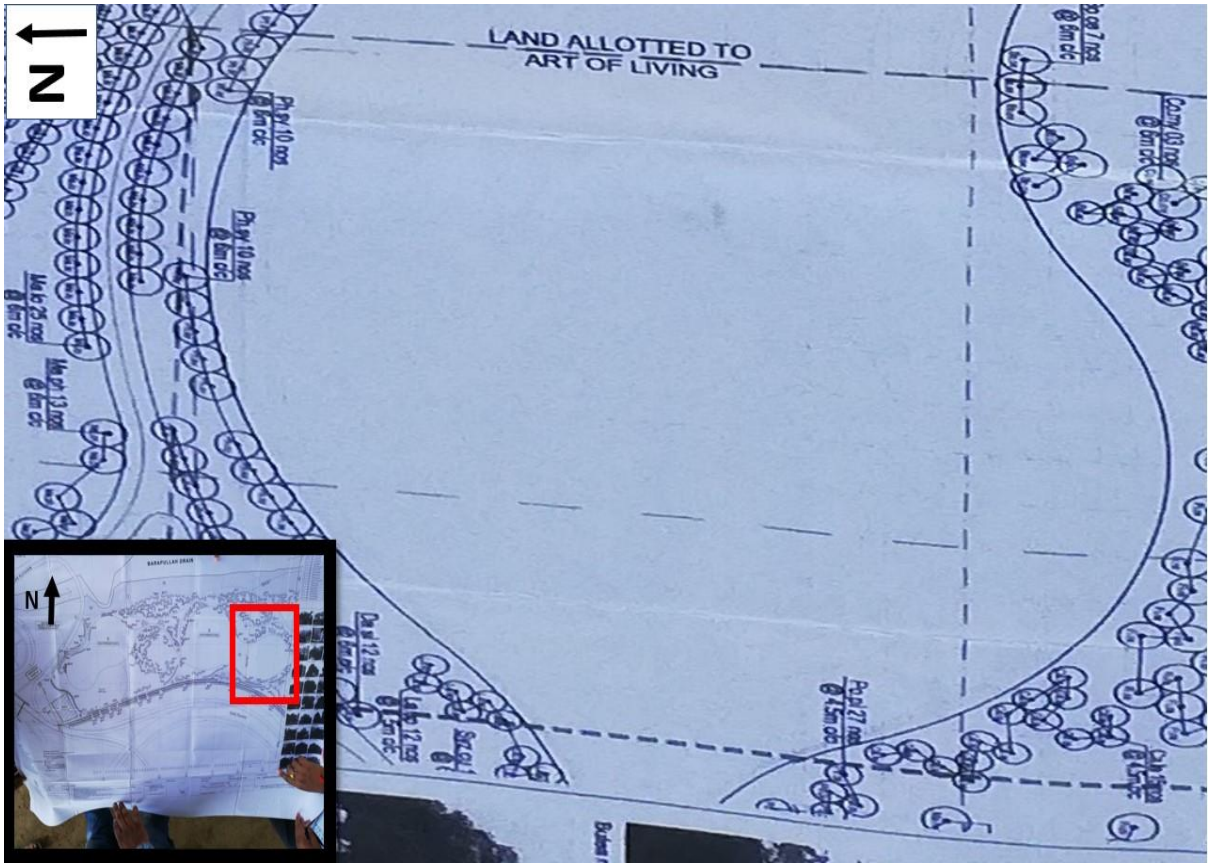



Figure 17. South Yamuna Biodiversity Plan by DDA (Not to scale), Area allocated to Art of Living funds to be named after the organisation, picture of the map clicked by Shivani Singhal in August 2021.

This follows the 'aesthetic governmentality' discussed above. Here the power dynamics at play are starkly revealed. This incident similar to the inequitable politico-legal patterns traced above shows how villainization and eviction are just limited to farmers. The three-day event is rewarded by the DDA by naming a section of the park under the foundation's name. By and large, the 'cultural Olympics' transformed the 'non-space' into a space of consumption for the upper-middle-class. The followers of the foundation mainly come from the upper-middle-class section of society (Alley et al. 2018, p.4). However, the farmers living in the area for decades have been erased completely.

Moreover, the construction of pillars for the Delhi to Meerut semi-high-speed rail or Regional Rapid Transit System (RRTS) that are being constructed in the area after evicting the farmers marks a juxtaposition. While the farmers are labelled as polluters, now the state is conducting large-scale construction activities here with the permission of the judiciary. The extent of this bizarre action can be seen below.


Figure 18. Construction in the South Delhi Bio-diversity Park section of the Yamuna floodplains, Left panel: Google Earth image, March 2023, Right panel: images by Shivani Singhal, November 2021.

The left panel of Figure 18 shows the satellite image of construction on the South Delhi Biodiversity Park. The right panel shows a sign by the Delhi Development Authority recognising the area as a 'sensitive zone' with 'no construction' and 'no dumping' behind which this large-scale construction by the state is taking place.

The 'spatial mode of governance' and 'calculated informality' discussed above are seen in this case. Thus, it is important to explore which trade-offs within the rejuvenated Yamuna initiative are justified, by whom and for whom. As discussed in Chapter 2, apolitical knowledge overlooks the factors contributing to problem diagnosis and solution formulation (Wijsman and Berb´es-Blazquez 2022, p.380). The focus becomes power over nature rather than recognising the power of one social group over another (Swyngedouw 2004, p.176). Thus, for the 'right' trade-offs inequitable solutions are justified without considering the broader context in which they are created, maintained, and reproduced.

## 4.6 Conclusion

This chapter by 'seeing' the Yamuna floodplain waterscape moves it from a 'non-space' to a 'cultural landscape'. The historical transformation of this waterscape due to the interactions of environmentalism of various actors such as the small-scale farmers, the state, the judiciary, and the environmentalists was central to this exploration. Through a political ecology analysis in this chapter, the current waterscape that is systematically erased and hidden in official documents is politicised. Therefore, this chapter provides context that enables the complex analyses of the three research questions in the following chapters, *(1) What power dynamics are at play in the Yamuna floodplains?,* in Chapter 5, (2) *How does the environmentalism of the farmers relate to the ongoing rejuvenated Yamuna initiative?,* in Chapter 6, and (3) *How do competing environmentalisms play out under the Rejuvenated Yamuna initiative?* in Chapter 7.

I first historicise the illegality of the farming practices on the floodplains and unpack the various tensions and complexities within the black box of farmers. This places them on various intersectional power axes and has been elaborated on in Chapter 5. This is important as the current official documents either criminalise the farmers or erase their historical presence and their relationship with the river and its floodplains completely through 'unmapping'. This not only stops the farmers from being envisioned as part of the solution instead of being viewed as the problem, but it also stops any possibility of this. However, through the socio-historical contextualisation in this section, ontologically farming and farmers are separated from pollution.

Next, the criminalisation of farmers is established by analysing the institutionalisation of environmentalism within various tools of governance such as planning, and judgements and their complex interaction with each other. Examined through bourgeoise environmentalism it is seen that environmentally degrading ad hoc development projects such as the Commonwealth Games Village and the Akshardham Temple are constructed and legalised within the DMPD-41 (DDA 2021). This shows how the Master Plan is practised selectively producing 'calculated informality'. This section also analyses how the large-scale concretisation is stopped through the intervention of mainstream environmentalists along with the farmers. The significance of this collaborative resistance has been discussed in

Chapter 7. Overall, the apoliticisation of the Yamuna rejuvenation initiative hides the unjust socio-spatial realities being created.

Finally, I analyse the shift of the environmental discourse to restoration and rejuvenation from development. The transformation of the floodplains through large-scale eviction for this rejuvenation is analysed by examining the producing waterscape. The dynamic nature of the waterscape of the officially 'empty' land is explored. This erasure leads to the creation of further systematic inequalities. Therefore, investigating the multiplicity of environmental interactions between various actors shows a more realistic picture deepening awareness of the material relationships within the particular waterscape (Chen et al. 2013, p.4).

When analysed through the political ecology lens, it can be seen that the spatial changes within the rejuvenated Yamuna initiative are still rooted in socio-ecological injustice. Therefore, it still causes a divide between the environmentalism of the bourgeois and the dispossessed by following the principles of exclusionary conservation discussed in Chapter 2. It is the interplay of all the above factors that creates the waterscape of Delhi. Therefore, the following chapters address various aspects of inequity (Chapter 5), knowledge (Chapter 6), and resistance (Chapter 7).

# Chapter 5 Multilevel structural inequities: Power analysis through political ecology

## 5.1 Introduction

Before talking about the environmentalism of the farmers, it is essential to establish that the farmers are connected to the Yamuna and the floodplains in a meaningful, complex, and messy way. This chapter addresses the first research question; *What power dynamics are at play in the Yamuna floodplains?* I have chosen to answer this by working through the lens of political ecology and the concept of waterscape. As stated in Chapter 2, the materiality of water, the political history of the landscape and the emotions, worldviews, practices, and processes combine to form a waterscape (Acharya 2017). Both official projects and everyday practices are embedded in power dynamics. This chapter analyses the power dynamics of the marginalised actors, in this case, the farmers and the fisherfolk, being dispossessed and displaced from the waterscape due to the creation of bio-diversity parks through the political ecology framework.

It builds from the thick description of chapter 4 and draws on data from interviews, conversations, and the life histories of farmers along with illustrative ethnography and field observation. Data from interviews with various other actors such as environmentalists, upper-middle-class *Dilliwale*, lower-class *Dilliwale*, state employees such as DDA and Fisheries, lawyers, and housing rights activists, cultural leaders are also used to explore multiple narratives and positionalities. Moreover, auxiliary data such as policy documents are used to triangulate official bureaucratic narratives.

While the previous chapter 'sees' the transforming Yamuna floodplain waterscape, this chapter focuses on the marginalised. I examine how the exclusion and multiscale vulnerability experienced by the farmers due to power relations driven by historical societal factors and the current rejuvenated Yamuna initiative squarely brings the official technical environmental discourse to the socio-ecological realities. Analysing the messy, complex, and tense socio-ecological realities moves away from both tendencies to criminalise the farmers as done by the rejuvenating Yamuna initiative or to portray a romanticised view of both the subaltern and the pre-colonial past. This chapter informs the analysis of complex

interactions of various environmentalisms in Chapter 6 and competing environmentalisms in Chapter 7.

This chapter first examines the messy realities of farmers and their connection with the river and its floodplains. This is done by focusing on land ownership based on legitimisation. These ambiguous and messy ownership patterns need to be understood as they become a factor of vulnerability and a window of resistance elaborated on in Chapter 7. Second, why and how these connections are being erased within the land-claiming farmers, the tenant farmers and the fisherfolk is analysed. Next, special attention is paid to the multi-scaler vulnerabilities faced by these groups due to stigma, exclusion from citizenship and illegality to portray the layered power dynamic at play. In the end, it is concluded that structural inequalities fundamentally shape the socio-ecology of the Yamuna floodplains.

## 5.2 Power relations dictating land ownership

As stated in Chapter 4, the prerequisite of the implementation of the biodiversity park is generally land use change in official planning documents[38]. This also becomes the basis of defining the aspired imaginary of the environment, the city and how various people are classified. In other words, it not only defines nature but also the stakeholders and their changing power relations as discussed in chapter 2. Thus, while connection to the land is formed by economic, social, cultural, spiritual, and ethical daily practices (Álvarez and Coolsaet 2020; West 2005), it is land ownership that becomes a key factor in driving power relations within environmental governance. A clear example of this is that as stated in Chapter 4, due to farming being banned, land-claiming farmers still get compensated due to rights being defined in terms of property[39]. In comparison, tenant farmers do not get compensated even though they form one of the vulnerable sections of society. Thus, here

[38] However, as stated in Chapter 4, multiple structures like metro project, Delhi Noida Direct (known as DND) Kalindi Park, Gautam Budh Park, Akshardham Temple, Commonwealth games village, and the Delhi Meerut metro to name a few, are first built and then official land use is changed to accommodate them haphazardly (Bhan 2016; Follmann 2016, 2015) showing flexibility in planning.

[39] While the DDA has paid some compensation, not everyone has received the money (interviews with land-claiming farmers). These transactions are also based on power practiced through personal connections in most cases.

rights are not based on needs but on land ownership. This section unpacks the complexities and constructed illegalities of land ownership in Chilla *Khadar*, a pattern followed throughout the floodplains in Delhi.

Natural resource management of land and water is a complex matter and goes through constant reconsideration. Owning property is intrinsically linked to colonialism and capitalism. However, in India, while it is identified as starting with the Gupta era (Dhavalikar 2007, p.7), land rights defined in terms of property became primary in colonial times on a large-scale level (Bhattacharya 1996). This changed the relationship people had with the land. In the neoliberal era, these classifications continue.

As stated in Chapter 4, while farmers were once able to derive control over land, as the land became prime property, this was disrupted, and the traditional land tenure arrangements were revoked. This reinforced inequalities. Land-claiming farmer (3) traced the geographic history of the area,

> *"ये सारी ज़मीन कबड्डी मैदान तक मेरी ही थी। ये घर, सड़कें तो बाद में आई है। पहले सरकार ने ये सड़क तक सारी ज़मीन ले ली। मेरे दादा-परदादा ओं ने जितने पेड़ लगाए थे, सभी को काट दिया। यहाँ सभी फल के पेड़ परिवार ने लगाए हैं। देखो (pointing to a tree) 1-2 अभी भी लगे हुए हैं।"*
>
> *(All the land till the Kabaddi ground (sports) was my family's. These houses, and roads… all came after. First, the government built the road and took all the land on the other side of it. All the trees that were planted by my ancestors were cut. They were very old trees. Look (pointing to a tree) now only 1-2 are left)."*

The above statement shows the changing socio-spatial aspects of Chilla *Khadar*. As stated in Chapter 4, the DDA acquired large agricultural lands and 'modernised' them. However, this accusation is not straightforward. When I asked DDA officer (3) why farmers were being evicted from the Chilla *Khadar* area when no specific plan was in place yet, he identified that vacating land was their priority. The officer elaborated that evictions are done as soon as they get the opportunity and once the land is vacated then it can be used for anything. This opportunistic land grabbing was also seen in the case of the South Delhi Biodiversity Park. This pattern brings the dangerous possibility of first removing current farmers from the land and then centralising farming and fishing activities, leasing it out to the highest bidders as discussed in chapter 4.

Thus, environmental governance needs to encompass epistemological, and ontological fractions based on property rights. Within Marxism, it is understood that private property rights estrange people from collective social existence. Through the money/property nexus, those in power are able to control who has access to resources and how they are utilised (Cook and Swyngedouw 2012). As discussed in Chapter 2, globally, urban green infrastructure has become a systematic way of acquiring property by the state. While infrastructure such as biodiversity parks is technically public property, it is juxtaposed with private property rules of exclusion (Gregory et al. 2009, p.602). Ghertner (2012) calls the private interest in public land the 'bourgeois inside'. Forman and Kedar (2004) also show how law functions within administrative and parliamentary decision-making democratic countries to strip off rights to property as and when required. How these factors of law and planning are navigated formally and informally for both having a claim on land and leasing land is discussed next.

### 5.2.1 Claim on land- Legitimacy and illegality

The ownership of land in the Yamuna floodplains is a complex matter. As stated by environmentalist (1), "*nobody really knows who owns what land*." The DDA claims to own 53% of the land on the floodplains (DDA 2019). Simultaneously the land is purchased, sold, donated, and rented out regularly by various actors. Hence, official, legal, and cultural ownership all clash. The land-claiming farmers continue to hold a claim on the land. This claim is negotiated, recognised, and accepted by both the tenant farmers and the state. While discussing why work on building a Biodiversity Park in Chilla *Khadar* has not started yet, a DDA employee (2) stated that some land was "private land". Digging deeper, the reason for the selective recognition of 'private land' was given as the farmer having 'powerful connections'. With the backing of these powerful connections, the farmer has been able to extend his claim on more and more land. Here the intersectionality of ethnicity and class while providing agency to the farmer also always makes him vulnerable to dispossession. Housing rights activist (1) shed some more light on the 'private land',

> *"ये सारी ज़मीन उसकी है। पहले उसके पास 100 भीगा ज़मीन थी। बादमे और ज़मीन ख़रीदता रहा। अब वो बोलता है की 500 भीगा उसका है।*
>
> *(All this land is his. Earlier he had 100 bhiga land. Then he purchased more and more land. Now he claims to have 500 bhiga land)."*

These ‘powerful connections’ are indirectly also utilised by the tenant farmers. Explaining further how they predict the degree of risks of evictions and strategize accordingly, housing rights activist (1) explained how the land-claiming farmer was also the,

> “इलाक़े के सरपंच जो हैं, उनके काफ़ी राजनीतिक संपर्क हैं, इसलिए अब तक उनकी ज़मीन पर कोई bulldozer नहीं चला है। DDA उनकी वजह से इलाक़े में बेदखली नहीं कर रहा है। हमें विश्वास है कि हमें लंबे समय तक बेदख़ल नहीं किया जाएगा। क्योंकि सरकार बेदख़ल करने की हिम्मत नहीं करती।
>
> *(Sarpanch (leader) of the area. He has a lot of political connections, so no bulldozer has ever gone on his land till now. The DDA is not doing evictions in the area because of him. We are confident that we won’t be evicted for a long time. Because the government does not dare evict (the land-claiming farmer)).”*

Even though tenant farmers are not the ones who’ve directly stuck a deal to escape evictions, they are able to make use of the deals too. However, these deals are full of risk for all farmers, especially the tenant farmers. This shows a continuous process of resistance and adaptation. The point is that while in the past, the farmers were unable to resist evictions due to being unaware of land ownership patterns and formal and informal rights granted based on that, most, if not all are now aware and plan resistance accordingly making them more likely to succeed. The various strategies of resistance will be elaborated on in chapter 7.

As can be seen above, instances of buying, selling, and donating land which is officially state property are a common occurrence. These transactions take place with the exchange of titles and paperwork. However, who can access these transactions is skewed in power relations. The intersectionality of class, religion, caste, and ethnicity dictating this is analysed by looking at a local Hindu religious leader planning to set up an *Ashram* in Chilla *Khadar*,

> *“आश्रम के लिए ये जमीन मेरे नाम करदी गई है। कागज़ों में लिखा है कि 99 साल के लिए ये जमीन मेरी है अब। कागज़त पूरे हैं।*
>
> *(This land has been donated to me to establish an ashram. The paperwork says that the land is under me for 99 years. My paperwork is complete).”*

Here the intersectionality of class, caste and religion gives the local religious leader legitimacy to 'own' land on the floodplains. In comparison, it is important to emphasise that all farmers are perceived by many actors such as the judiciary, state and upper-middle-class *Dilliwale*, as Muslim (Bangladeshi) due to historical factors and face exclusion. These factors enable spatial changes and have done so in the Yamuna floodplains historically as seen in the demolition of Yamuna Pushta (2004) mentioned in Chapter 4 (Bhan 2016; Adve 2004)[40]. Thus, land ownership is not just a monetary transaction but is also clouded in debates on public welfare, development, social justice, and national interest. Now, a similar narrative displaces tenant farmers tagging them as 'Rohingya refugees'. A land-claiming farmer (4) criminalising the tenant farmers stated,

> *"ये नेता वोटो के लिए लोगो को यहां देते हैं। असल में तु लॉग इन करें Rohingya से हैं*
>
> *[These politicians allow migrants to live here. Actually, they have come from Rohingya (illegally and are Muslims)]."*

Thus, environmentalism in India continuously interacts with various intersectional interest groups under the nation-building processes. Here national citizenship takes the form of an authoritarian and neo-liberal outlook. It emphasises a 'modern' lifestyle and a 'world-class' environmental imaginary. This encompasses the everyday anxieties related to security and disorder which are blamed on the minorities and shape socio-spatial relations. A nationalist identity is formed by emulating a consumerist lifestyle while at the same time following 'traditional Indian (Hindu) values'. Hansen (1999, p.4) states that "Hindutva (Hindu Nationalism) combines well-established paternalist and xenophobic discourses with democratic and universalist discourses on rights and entitlements, and has successfully articulated desires, anxieties, and fractured subjectivities in both urban and rural India." Through this, all Muslims are seen as anti-national, secretive, conspiring, and violent (Hansen 2001, p.89).

[40] The majority of the Pushta residents evicted were Muslim. They were called 'terrorists' and told to go back to Pakistan and Bangladesh (Adve 2004, p.3). Moreover, there was a wide-scale deletion of Muslim names from the electoral list (Bhan 2016, p.10).

Therefore, the constructed 'Bangladeshis' much like the narrative of 'Biharis' discussed below have no space in the apparently otherwise stable world-class city of Delhi, or India, and become non-citizens. In light of this, the land 'purchase' by a Hindu religious leader prompts the question of would the donation have been possible if the religious leader was Muslim?

### 5.2.2 Claim on leasing land: Tenant farmers

Similarly, leasing land is also shrouded in unequal power dynamics where tenant farmers are largely left vulnerable in both formal and informal processes. However, this is not even acknowledged let alone considered within the rejuvenated Yamuna initiative. DDA officer (1) quoting the NGT order (2019) stated,

> *"इनको खाली करने का आदेश आया है। हम तो बस वही कर रहे हैं। अगर नहीं किया तो हमारे ऊपर 5 लाख (per month) का fine हो जाएगा।*
>
> *(The order has come to evict them (the farmers). We are doing just that. If we do not follow the order, then we (DDA) will be fined £5,000 per month)[41]."*

Here the DDA employee justifies the evictions as something that they are performing without any option or say in the matter. However, as can be seen, land ownership and legitimacy are extremely complex. This complex ownership and claim on land are also recognised by tenant farmers. Describing why he's paying rent to the land-claiming farmers, a tenant farmer (2) explained,

> *"हम तो उसे पैसे देंगे जो हमें यहां रहने देंगे। यही दुनिया का दस्तूर है। ऐसा ही होता है।*
>
> *(We will give rent to whoever lets us stay here. This is the way the world works)."*

However, this transaction of rent happens without any paper trail as opposed to land purchase which even though informal, is carried out through paperwork as claimed by the religious leader above. Hence while recognised socially, leased out land becomes illegitimate officially and legally. The way this shapes evictions, compensation and rights will be elaborated on in chapter 7.

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[41] This amount was to be recovered from erring DDA officers and used for the restoration of the environment (NGT 2019).

This makes tenant farmers vulnerable to cheating and intimidation by various actors such as agents, lawyers, land-claiming farmers, politicians, *प्रधान* (self-appointed political spokesman), and police. These local-level everyday interactions and mechanisms reconstitute the state and its operations. Therefore bribe-giving is not just an economic transaction but has also become a cultural practice (Gupta 1995, p.381). This insecurity was relayed by a housing rights lawyer (1).

> "क्योंकि कुछ पक्का नहीं है तो बहुत लोग किसानों का फ़ायदा उठाते हैं। अभी पिछले हफ़्ते ही हमें पता चला कि कोई वकील इन्हें ये बोलकर कि वो eviction से बचा सकता है, करीब ₹10,000-20,000 ले गया। अब ये fees देने के लिए किसान loan लेते हैं। यह सोच कर हम चौकन्ने हो गए क्योंकि हम लोग तो pro-bono काम करते हैं। अब हम कोशिश कर रहे हैं कि कुछ और जानकारी मिले।
>
> *(Because of the uncertainty (of evictions), a lot of people take advantage of the farmers. They take the money and promise to get land rights. Last week we got to know from a few farmers that some lawyer is going around telling them that he can save them from evictions and charging ₹10,000-20,000 (£100-200). These farmers are taking out loans to pay the fee. That raised alarms as most of us work pro bono. We are trying to dig into this and find out more details)."*

Moreover, housing rights lawyer (5) informed that,

> *"DDA pays off pradhans etc. to keep the jhuggi dwellers calm and not unionise and take action."*

This fear of tenet farming unionising was also seen in land-claiming farmers. A land-claiming farmer stated,

> "ये लोग झुंड में आते हैं पूरे परिवार के साथ। इतने सारे लोगों की ज़रूरत थोड़ी ना है खेती के लिए। कुछ को रहने दो। एक खेत में एक झुग्गी काफ़ी है।
>
> *(These people come in large groups with entire families. These many people are not required for farming. Let some remain. 1 jhuggi per farm is enough)"*

Here the complex overlapping power dynamics can be witnessed. The land-claiming farmers need the tenant farmers to lease out the land and have farm labour. So, they do not want all of the tenant farmers evicted. However, they still support the ongoing eviction drive to a large extent as this violence limits the ability of the tenant farmers to claim better wages

and leasing agreements. During the fieldwork I was often informed by various tenant farmers and housing rights activists about instances of threats being issued, meetings of tenant farmers being violently disrupted and in extreme cases, fire being set to huts by large-scale farmers.

Thus, while officially, the floodplain land cannot be sold, bought, or rented out, these actions happen regularly. These power relations clouding land ownership, claim and lease drive the tensions within the creation the bio-diversity parks politicising them. However, the factor of land ownership alone does not explain the power dynamics at play within the transforming waterscape in Delhi. Various other socio-cultural factors leading to dispossession and multi-scaler exclusion have been elaborated on below.

## 5.3 Socio-cultural dispossession

One of the challenges to achieving sustainable development is that many of the world's poor depend on rapidly disappearing and fragile ecosystems (Chappell et al. 2013, p.3). Due to urbanisation, there has been a shift of farmers leaving for employment in secondary and tertiary services as discussed in Chapter 4. This socio-cultural dispossession of land-claiming farmers, tenant farmers and fisherfolk is analysed below.

### 5.3.1 Land-claiming farmers

The previous section indicates that all farmers are not economically weak. Some are well connected with ample land, property, and monetary assets. Yet, they are being dispossessed and fail to gain security and legitimacy. This shows that the singular class factor fails to define the upper-middle-class in India as discussed in Chapter 1.

Land-claiming farmers have an emotional connection and societal status joined to the land, having gotten it from their forefathers and making it cultivable[42]. This has determined their lifestyles, habits, and social status. Like all farmers, the land-claiming farmers, due to the vulnerability of the occupation and modernisation of the city are leaving farming practices. During the research area visits, it became clear that the younger generations did not visit

[42] Chapter 6 elaborates on this. Moreover, the grounds on which evictions are being warded off are stated as the "*history of cultivation of the land goes back to pre-independence era since when these lands have been cultivated by the forefathers…*" Tulsi Ram v Delhi Development Authority, High Court of Delhi, 2018.

the farms much. This is because one, the families do not live on the farms anymore and instead live in adjacent urbanised villages. Two, the temporality of farming due to state policies and judicial rulings forces the families to not economically depend wholly on farming. Three, urban occupations are preferred due to modernisation factors mentioned in Chapter 4. The younger generations' social status is tied to more urban activities and assets. A land-claiming farmer (3) stated,

> *"खेती ही हमारा पेट भरती है। हमारे लिए ये बुरी नहीं है। मैं चाहता हूं कि बच्चे खेती जारी राखे। साथ में कुछ और भी करे, पढ़ लिखके नौकरी या जो भी उनका मन करे।*
>
> *(Farming feeds us. It is not bad (occupation). I want my kids to continue farming. They can do something else side by side like a job after studying or whatever they would like to do)."*

Here, the farmer while wanting the occupation within the family to continue is actively providing his children with education to gain a more 'modern' job. Farming then becomes a part-time activity at best.

Another land-claiming farmer (7) described how her family has moved away from farming completely. However, the family still has a small plot of land where they grow food for their consumption. Running a tea shop next to the farms she stated,

> *"ज़मीन तो बहुत है हमारे पास। ज़्यादातर जमीन हमने किराये पे चढ़वाई है। हम चिल्ला में रहते हैं। हमें सरकार से पैसे की मांग है जमीन के बदले। मेरे पिताजी खेती करते थे। पर अब तो उनकी उमर हो गई है। मेरेको खेती करने का मन नहीं है। मेरे पति या भाई किसको नहीं है। मेरे 3 बच्चे हैं। ऐसा नहीं लगता कि उन्हें भी कुछ ज्यादा खेती का शौक है।*
>
> *(There is a lot of land. Most of it we've given on rent. We live in Chilla (an urban village). Our demand is monetary compensation instead of keeping the land (from the state). My father used to farm but now he's old. I do not want to farm. My husband and brother also do not have any interest in farming. I have 3 kids. Even they do not seem much interested in farming)."*

Here the point is not to promote continuation of family occupations. The point is to look at the changing generational practices and dispossession due to river pollution. These two cases also show the various demands of the farmers. This has been elaborated below.

### 5.3.2 Tenant farmers

Tenant farmers have built a connection with the land, some of them being born here and having spent all their lives here. They feel a sort of ownership of the land as they have made it cultivable with their hard work and toil. Recognising that being uprooted and shifted, they will have to start the whole process again, a tenant farmer (8) explained,

> *"कही भी जाए तो शुरू से सब करना पड़ेगा। वहा का मौहाल कैसा हो...जमीन कैसी मिले... आस पास क्या हो... आसन नहीं होता। यहाँ भी हमें इतना टाइम लग गया था सब शुरू करने में। पहले मेरे मां बाप आए 2000 मे। उन्हे 5 साल लग गए सब शुरू करने। मैं 2005 में आया।*
>
> *(Wherever we go we'll have to start from scratch. We do not know the environment there, how the land will be, or what will be around the area. It took us such a long time to settle here too. My parents came in 2000. It took them 5 years to get things started. Then I came in 2005)"*

This perpetual limbo and struggle through various policies for the right to livelihood and survival have exhausted farmers making them ready for a compromise. However, if given a choice of continuing farming, they would do so. Housing rights activist (1) explained how the elongated fight has tired out the tenant farmers.

> *"यहाँ अब लोग थक गए हैं। कुछ भी आगे का सोच नहीं पाते। बिना बताए कभी भी बुलडोजर चल जाते हैं... वैसे लोग यहां खुश हैं खेती करने में। कोई वापस नहीं जाना चाहता। वापस जाके भी क्या मिलेगा? वहासे इसीलिए आऐ कि वहा गुजरा नहीं होरा था। खैर यहापे अब जीना मुश्किल करदिया है। हमें अब order का इंतजार है।*
>
> *(Here people are now tired. They can't plan anything for their future definitely. Without any warning, the bulldozers come and destroy their homes and crops. Generally, people are happily farming here. Nobody wants to go back. What will they get even if they do go back? The reason for coming here is because over there it was difficult to survive. Anyway, over here it has become very difficult to survive. Now we are just waiting for a (judicial) order)."*

The DDA runs bulldozers on crops and lifts out the water pumps[43] through which multiple families of farmers get groundwater. They also stomp out and destroy all the crops. Moreover, they scoop out the huts through JCBs[44] and dig trenches around the area so that

[43] These are used by multiple families and cost around ₹10,000-15,000 (£100-150).

[44] JCB (Joseph Cyril Bamford Excavators Ltd) manufactures equipment for construction, agriculture, and demolition.

the farmers have to invest a lot of time, labour, energy and money to settle back again. Even if they do, they are warned of being uprooted again within a few days through the same process (SANDRP 2020).

However, it is not just the vulnerabilities created due to land security that cause dispossession. Socio-political internalisations create identities considered 'less than human' or 'non-being'. This creates dichotomies such as normal/inferior, and superior/unworthy. Oppressed communities are not free from the biases of the oppressor (Wijsman and Berb´es-Blazquez 2022, p.384). The oppressed get a distorted self-image. They see themselves and others through that lens. This internalisation can be seen in my interaction with the tenant farmer (TF)(6). I greeted her early one morning as she was making ropes used to tie green vegetables such as batches of साग (spinach), धनिया (coriander leaves), and मेथी (fenugreek) together.

*TF(6) "हम तो गंदे हैं।*

*(We are dirty)"*

*Q- Why? What do you mean?*

*TF(6) "*देखो हम पूरे दिन ज़मीन पर, मिट्टी में बैठे रहते हैं। रोज़ सुबह नहाते हैं फिर गंदे होते हैं।

*(We sit on the floor in the mud the entire day. We take a bath in the morning but still become dirty working.)"*

*Q- Why do you think that? Who said this?*

*TF(6) "*सब लोग सड़क पार।

*[Everybody across the road (Gated societies)]."*

Here the farmer is not only stating how her body becomes 'dirty' by sitting in the mud all day but also how her occupation (farming) itself is dirty and in extension she herself is 'dirty'. Psychological processes cannot be detached from structural, material conditions and internalization. Due to social exclusion, the farmers reject their occupations themselves. This investigation of the practices that produce 'objects and 'subjects' enables a critical rethinking of socio-natural aspects of their rationality.

These statements show the diversity of demands and futures being sought by farmers. The farmers are situated within the material environment and the socio-political systems and respond accordingly. While some would like their families to be involved in farming activities in the future, others want to get out completely. However, none of the farmers exclusively see a future involving farming as a primary occupation. The chapter aims to pay heed to deployments and reappropriations of dominant ecological practices, logic, and systems.

### 5.3.3 Fisherfolk- मल्लाह/ मछली मार/ मांझी

Vast socio-cultural dispossession of the fisherfolk is seen on the Yamuna floodplains. Small boats were run to cross the river previously and there was a huge Mallah/ Machli Maar/Manjhi (fisherfolk community, lower caste) population. Till 200 CE, fish was generally considered a valuable article of food among the Hindus. It was only later that due to social, religious, and political influences meat and fish became taboo (Reeves 1996, p.263). This taboo was extended to the fisherfolks who came to be viewed as lower caste. Even within fishing communities, there is a caste hierarchy with some considering themselves to be superior to others (Gupta 1991, p.126). This shows the intersectionality of caste, class, and ethnicity.

Within the Chilla *Khadar* floodplains, lower caste fisherfolk families were not prominent and were instead located adjacent to the area, on the edges of the city. As will be discussed in Chapter 7, farmers have started to make space for themselves, to whatever degree, in the mainstream environmental discourse. However, interviews with most mainstream environmental and human rights activists and lawyers working on the issue of the polluted river in Delhi revealed that they were not aware that fisherfolk and the occupation of fishing are still present in the area. In an informal conversation, a scholar working on caste, while discussing this topic commented how the lower caste in this case were not even privileged enough to be identified as going through dispossession within the discussions resisting evictions.

While *Namami Gange* (2021) encourages fishing in the river, the occupation is systematically being removed by the state and the judiciary in Delhi. Ecologically, the fisherfolk are not the ones who have exterminated the fish. However, now due to the water

pollution, fishing has been completely banned as heavy metals were found in the fish (Sadhu 2021; Agarwal 1995). However, fishing is still conducted after giving a cut to the police if some resilient fishes survive in the river.

Fishing once happening all year round, has now turned into a seasonal activity as the monsoon is the only time when the river is rejuvenated enough for most of the fish to survive. Now the aquatic life is almost dead and boating services are not required due to the construction of multiple bridges across the river. The pollution, ill health, dwindling catches, and political segregation led to the total dispossession of this community. As a result, only a handful of fisherfolk are left operating in the area. Conversations with farmers revealed that due to the almost erasure of the occupation, these communities have shifted to other occupations such as construction, riding rickshaws, recycling business and so on. The traditional management system has almost been dismantled.

Earlier the river was a common resource and fishing was a common activity. To conduct the same activity, fisherfolk now must get a permit/licence from the government. I was informed by the Department of Animal Husbandry, Dairying and Fisheries which issues these documents that in recent years there has been a sharp decline in the requests to issue the permit/licence. Upon asking an officer there the reason for it I was told,

> "*आजकल के बच्चे तो वैसे भी ये काम नहीं करना चाहते। कुछ future है ही नहीं इसमें। और जब से system online shift हुआ है उसके बाद वैसे ही बहुत कम permit के लिए application आती है। लोगों को online application करना नहीं आता। इसलिए अब ज़्यादातर हमारे पास वो application आती हैं जो fishing को शौकिया करने के लिए permit चाहते हैं ।*
>
> *(The younger generation does not want to continue fishing activity anyway. There are not many fish left because of the pollution. There is no future for fishing. Also, after the system shifted online, there was a sharp decline in requests as the fisherfolk did not understand the new system. After that, we mostly get applications asking to permit fishing as a hobby)."*

Here the officer declares fishing as an occupation that has no future. He sees no hope for the river to ever become rejuvenated. The systematic implications of this leading to marginalising policies are discussed in Chapter 6. He also mentions the system going online also as a factor in declining applications. However, it should be noted that fishing in the

Chilla *Khadar* area is also very hierarchical. Socially, just like farming, the Jat/Gujjars are the ones who are able to obtain permits and licences from the authorities, when available, using their connections and money. This essentially gives them rights to all fish in huge stretches of the river. The rest end up working under them and are usually ranked the lowest on the caste hierarchy in terms of social status. Anyone who fishes otherwise must pay a cut (as high as 50%) to them (Interview with fisherfolk).

Image 4. Popular fishing site in South Yamuna in Delhi, image by Shivani Singhal, July 2021.

Image 4 depicts one of the sites in South Yamuna on the Delhi-UP border where fishing is conducted. The dam on the site makes water stable which formally allowed fish to thrive in the area. However, now due to water pollution, very few fish survive. The white foam on the water in the picture is due to the inflow of polluted water. On days like this when the water is extremely low and the water pollution exceedingly high, no fish can be found.

Most fisherfolks have shifted their occupation, mainly to farming and now to various other occupations such as recycling, construction, and rickshaw pulling to name a few. Describing the changing occupation, a fisherman proudly handed me the cutting of a newspaper article mentioning the award that his son won.

> *"मेरा परिवार मछली पकड़ता है। अब पानी में जाओ तो खुजली हो जाति है। अब मछली से ज्यादा लोग निकलते हैं। बहुत बार हमने लोगों की जान बुचाई है। जब भी कोई लाश निकलती है तो police हमारे पास आती है। मेरा बेटा बहुत अच्छा गोटाखोर है। राष्ट्रीय स्तर का! उसको सम्मान भी किया गया है!*
>
> *(My family has been fishing for generations here. Now if you go into the waters, you get a rash. More than fish I pull out people now. We have saved a lot of lives. When the police want to pull out a dead body from the river, they call us. My son is a great diver, at the national level. See he has won an award also!)"*

The day I met the fisherman, these conditions persisted. Hence, the fisherman was not fishing but was in the area due to getting a call from the police to get help pulling out a dead body from the river. As many reporters were present, he mistook me for a reporter and started describing the events of the day. This case presents the ethical dilemma mentioned in Chapter 3. In this case, I spoke to the fisherman first and then in the end went through the ethical requirements of explaining my research, getting consent and so on.

Bhan (2016, p.11) recognises claims made by the subaltern to be based on a mix of political, ethical, and moral rights and needs. Similar negotiations are seen in Chilla *Khadar*. A boatman expressed,

> *"हमें पता है की ज़मीन कायदे से DDA की है। वो हमें कभी भी हटा सकते हैं। ये मेरी ज़मीन नहीं है मुझे पता है। मेरे पास Bihar में जमीन है और वो मेरा हक है। वो मेरे से कोई नहीं ले सकता। ये ज़मीन मेरा हक नहीं है। पर इसका मतलब ये नहीं है कि हमें रातो रात हटाना सही है। हमारा रोज़गार है याहा। सरकार कोई और रोज़गार दे सकती है तो बतायें। हम मेहनत से नहीं डरते, मेहनत का खाते हैं।*
>
> *(We know that this land belongs to the DDA. They can remove us anytime. This is not our land. I have land in Bihar and that is my right. That cannot be taken from me. This is not our right. But this does not mean that we are removed without any warning. This is our livelihood. If the government can give us any other livelihood, then it should tell us. We are not scared of hard work. We eat from our hard work).*

Here the boatman is stating that while it is not his right to have the land itself, it is his right to work on the land. The farmers are not only claiming the narrow right to housing or livelihood, but they are claiming their right to design, reshape and transform the city. This is important as this understanding opposes the narrative by the state, the judiciary, and the upper-middle-class dictating that the farmers have taken over 'free' land. How this debate shapes resistance has been elaborated on in Chapter 7.

Image 5. A boat used to cross the river, image by Shivani Singhal, August 2021.

Image 5 shows a wooden boat used to cross the river. While I crossed the river on the boat with the help of a fisherman assisted by a land-claiming farmer, he asked me if I knew how to swim. When I said yes, he humorously asked me to save him from drowning as the river was deep and he didn't know how to swim. This was because while his father took his elder brother to the river frequently to bathe in, by the time he was born, the river was not as

clean, so he did not go in the water much. This shows how pollution is breaking generational habits.

There is no doubt that the socio-ecological relations in Delhi are in crisis and the status quo won't suffice as discussed in Chapter 1. However, the crisis is bound to manifest even more clearly if the 'nonmodern' occupations of farming and fishing are made to disappear. While the above sections analyse the power relations clouding land ownership and socio-cultural dispossession between land-claiming farmers, tenant farmers and fisherfolk, the next section analyses multi-scaler exclusion faced by all farmers due to cultural stigma and illegality.

## 5.4 Multi-scaler exclusion

### 5.4.1 Exclusion due to cultural stigma

Environmentalism depends on one's pre-existing, deep-seated, cultural worldviews, and distinct combinations of beliefs and values which provide a lens through which reality is perceived. These come from factors such as identity, citizenship and belonging. It conveys who belongs, whose interests are important and who has a place at the table. This cultural stigmatisation goes hand in hand with political and economic exclusion. Through these processes, citizenship for specific groups is blocked.

As discussed in Chapter 4, most of the small-scale farmers migrate mostly from UP and Bihar. However, they are simply referred to as 'Bihari' (people from Bihar) by the large-scale farmers. This tag has various class, caste, religious and gender connotations. Biharis are seen as backward, unmodern, and unorderly, everything that the world-class city of Delhi, and India, want to leave behind. It is important to note here that while 'Bihari' is used to refer to unskilled workers, a large portion of migrants from Bihar comprises white-collar upper-middle-class workers in Delhi (Fazal 2016, p.98). However, there are multiple narratives at play here. Jats and Gujjars themselves are seen as 'unruly', 'गवार' (uneducated) and *मंद बुद्धि* (dim-witted) by the upper classes. I analyse how the farmers face exclusion through the environmental discourse by the 'Bihari' and the 'unruly' tags.

The stigmatisation stemming from the tag of 'Bihari' follows gender politics of security and civilising discourse. Orientalist discourse is at play where the developed urban population is at risk of the 'non-developed' 'poor' Bihari migrant. Here women are used as a tool for neoliberal development. Reflecting this, an upper-middle-class man stated, "*When there are high-end restaurants built in the floodplains, people will start going there and it will make the area safer for women*". Here the 'people' referred to are the upper-middle classes. Here the 'Bihari' is seen as wild and savage who need to be disciplined and brought to order by state intervention. Thus, women's safety is used as a tool to police the farmers. As a result, they are increasingly targeted by the police as scapegoats[45]. This was seen clearly when sexual violence in urban cities against upper-middle-class women was blamed by Hindu nationalist leader Raj Thackery on lower-class Bihari migrants (The Hindu 2013)[46].

Moreover, this social construction of the farmers being 'unruly' and 'uneducated' is often perceived by various actors to be statically hegemonic and 'natural'. Upper-middle-class *Dilliwala* (1) on evictions stated,

> *"Many parts of Delhi such as these places are governed by slum people. There is no control there. They do what they want to do. It has become their culture."*

By labelling farms as slums, farmers as uncontrollable, and them utilizing the land as their culture, an ungovernable, unruly and nuisance image is formed. Through this contrived image, they are excluded from both citizenship and rights. These parameters are adopted by the economically weaker sections of society too. A housekeeper talking about the farmers stated,

> *"मैं society मे काम करती हूं। मैंने देख देख के सीखा है कि थूकना नहीं चाहिए, कूड़ा सड़क पे नहीं फेकना चाहिए। पर ये लोग नहीं सीखते ना। ये सारा कूड़ा नदी में फेक देते हैं। इन्हे नहीं पता कि ये भी बीमार हो गए हैं उससे।*

[45] This might be due to the middle-class feminism movement in India, especially in mega-cities such as Delhi, being driven by class dynamics (Atluri 2013, p.373).

[46] Women are regulated in patriarchal systems. Respectability takes the form of chastity and morality both in private and public spheres (Joshi 2001). This moral superiority is intrinsically exclusionary and is practised in the civic order as such (Fernandes 2006, p.17). Generally, the middle-class and especially middle-class women feel uncomfortable in spaces that are not restricted and homogenised in terms of class, caste, and lifestyle (Frøystad 2006, p.159).

*(I work in (gated) societies. I have seen and learned not to spit, and not to litter, but not everyone learns. Farmers near the river throw garbage and get sick. They do not know)."*

While here the farmers are identified as the ones littering the floodplains, Chapter 7 describes how the upper classes are recognised by the farmers as the ones littering. Nonetheless, it is seen here that through the discourses of 'poor Bihari' and 'unruly Jat', these farmers are associated with 'disorder' and coming in the way of the imposition of a metropolitan spatial order. Their resistance for survival is seen as a refusal to fit within the bourgeois citizen-dictated order based on discipline, rationalisation, sanitation, beautification, and cleanliness. Therefore, the grand capitalist project of 'upgrading' open spaces to public spaces leaves out most people from reaping the benefits.

### 5.4.2 Exclusion from citizenship

As discussed above, a nationalistic narrative can be a strong exclusionary force. This othering removes the marginalised from the realm of citizenship and personifies illegality. The farmers are thus not given space to claim the city as their own despite being an active part of literally building it for decades. Ingram et al. (2007) highlight the social process called 'maximising the difference' through which attempts are made to distinguish themselves from other citizens to gain benefits. Individuals have multiple, overlapping social identities at various scales (Chung and Milkoreit 2021, p.4). All these traits are selectively evoked making new (and contradictory) citizen-subject identities. How this interacts with environmentalism in Delhi has been elaborated below.

Citizenship by the upper-middle-class *Dilliwale* is understood in global terms by imagining themselves to be global citizens, in national terms due to the current hyper-nationalistic drive and in local terms by being a citizen of Delhi. Global citizenship is aspired to by the postcolonial upper-middle-class through participating in consumption (Vedwan 2007, p.670). They often see themselves as a global citizen with local roots and who are proud of their national heritage. Indian traditional values are described as a romanticised pre-colonial society with harmonious social relationships and ecologically sensitive resource use practices. However, this romanticisation erases pre-colonial injustice and inequality (Sinha

et al. 1997, p.67). A state employee (4) commented on the exploitation of the floodplains and neoliberal greed while romanticising the pre-colonial 'Indian culture',

> *"One should avoid floodplain areas (for development). They should remain untouched. Indian culture is not like that (ecologically exploitative). The floodplains should always be left alone… Earlier people were fine. Now people have greed. If I hit my car on the road people will kill me. Spectators will not even ask what happened. People now think that they are individuals. They are not bothered about others."*

These aspects help in tracing the way environmentalism shapes up in *Khadar*. The bio-diversity parks aim to rebuild a romanticised notion of the untouched floodplains while making room for modernising it with pathways, seating areas and parking. This becomes problematic when injustice and inequality embedded within this environmental imaginary are erased.

The global and national complexity is added onto with an additional layer of understanding the exclusionary citizenship of Delhi as theorised by Bhan (2016). This can be seen by land-claiming farmer (12) sternly telling a tenant farmer who was describing health risks due to river pollution to me,

> *"अगर इतनी दिक्कत है तो वापस Bihar क्यों नहीं चले जाते?*
> *(If there are so many problems then why don't you go back to Bihar?)"*

Here again 'Biharis' have not just been pushed out of national citizenship but also the 'local citizenship identity' of Delhi. Thus, power not only shapes the wider socio-ecological processes but also citizenship. This is important to be looked at to make sense of the social and natural world. Questioning someone's citizenship makes them into what Bhan (2009) calls 'improper citizens' and denies them 'full citizenship' (Chatterjee 2006). Thus, only 'good', 'urban' and 'legitimate' citizens have the right to the city and the environment. Here, an epistemic superiority is established dismissing the concerns of displacement and dispossession.

### 5.4.3 Illegality and punishment

Another reason why the eviction of farmers is deemed justified is due to a lack of 'seeing' them. Yamuna *Rakshak* (Guard) [47] (1), private contractors hired by the DDA to patrol the floodplains and stop dumping of waste in the river stated,

> *Yamuna Rakshak (1)- "लोग राख और फूल फेंकते हैं। हम उन्हें रोक नहीं सकते, उससे इतना प्रदूषण भी नहीं होता। लोग कहते हैं कि यह उनकी आस्था है और वे sorry कहते हैं। हम ज़्यादा कुछ नहीं कर सकते। बहुत सारे लोग कूड़ा फेंक रहे हैं। हम हर किसी को नहीं रोक सकते। जुर्माना कोई विकल्प नहीं है। हमारे पास ₹50,000 के जुर्माने वाली पर्चियों की किताब है। कोई भी इतना पैसा नहीं दे सकता। हम नदी में एक नारियल फेंकने पर किसी पर जुर्माना नहीं लगा सकते। लोग loan पर car और bike का इस्तेमाल करते हैं। उनकी salary 10,000-20,000 रुपए है। वे जुर्माना कैसे भरेंगे?*
>
> *(People throw ashes and flowers (for cultural/spiritual purposes). We can't stop them it does not even pollute that much. People say it is their faith and they say sorry. We can't do much. There are also so many people throwing waste (cultural/spiritual). We can't stop everyone. The fine is not an option. We have a fine book of ₹50,000 (£500). No one can afford that. We can't fine someone for throwing 1 nariyal (coconut) in the river. People use cars and bikes on loan. Their salary is Rs 10,000-20,000 (£100-200). How will they pay the fine?)"*
>
> *Q- Farmers are also getting evicted… how will they manage?*
>
> *Yamuna Rakshak (1)- "ज़मीन सरकार की है। किसान यहाँ अवैध रूप से रह रहे हैं. उन्हें voter card या Aadhaar card नहीं मिलना चाहिए, यह वोट के लिए है।*
>
> *(It (the land) is owned by the government. The farmers are living here illegally. They should not get voter cards, or Aadhar cards (national identity cards), it is for the vote bank.)"*
>
> *Q- Compared to the upper-middle-class, they are economically weaker, right?*
>
> *Yamuna Rakshak (1)- "वे बहुत अमीर हैं. उनके पास बहुत सारी ज़मीन है। सरकार ने उन्हें अच्छा ख़ासा मुआवज़ा दिया है। वे लालची हैं और अधिक मुआवज़े की माँग करते रहते हैं।*
>
> *(They are very rich. They have so much land. The government has given them so much compensation. They are greedy and keep asking for more.)"*

Here the middle classes are 'seen'. When dealing with them the issue of polluting the river is judged through the larger socio-economic aspect. The upper-middle-classes are recognised as hard-working under unfair socioeconomic conditions. However, when it comes to the farmers, a narrow vision of criminalised 'greedy' and 'illegal' is used. The middle classes get

[47] Private guards hired by the Delhi Development Authority to guard the Yamuna floodplains against any illegal activity.

the privilege of a layered analysis. However, the farmers get boxed into a singular identity of being illegal polluters as discussed in Chapter 1. Moreover, the Yamuna *Rakshak* when talking about the rights and needs of farmers completely erases the tenant farmers. This conversation also points to the complexity of land ownership and rights being defined based on it as discussed above. Ross (2011, p.249) states that "sustainable solutions are never applied in a social vacuum, nor do they emerge from one". This governance deliberately targets specific individuals and communities causing exploitation. These aspects dictate both the problem/solution formulation and the resistance strategies. This has been elaborated on in Chapter 6.

## 5.5 Conclusion

This Chapter answers the first research question, *What power dynamics are at play in the Yamuna floodplains?* Here the intersectionality and differences within the box of 'farmers' are highlighted. Analysing the power dynamics, exclusion, and multi-scale vulnerability within various groups results in two things. One, the socio-ecological and political aspect of the issue is brought to the forefront, following the discussion on the technically driven policies and judgements in Chapter 4. Two, the conflicts, tensions, and complexities within the socio-ecological are analysed paying heed to Williams and Mawdsley (2006) caution of romanticizing subaltern groups and the historical experiences within environmental debates in Chapter 2. This cautious approach has been taken through the intersectionality lens. It is concluded that farmers are connected to the river socio-ecologically in a messy, complex, tense manner. How these realities dictate their environmentalisms and resistance by dictating their access, ownership, and resourcefulness along with vulnerabilities, violence, and exclusion with be analysed in chapters 6 and 7.

It is concluded that displacement, dispossession, and negative resource distribution are complex and cannot be summed up to be solely top-down. They are a consequence of unequal power relations driving environmentalism from above (Bakker 2007, p.437) from within (Negi 2011, p.193) and internally due to internalisation of bias by the oppressed. Therefore, structural inequalities affect the socio-ecology of the Yamuna floodplains.

The legal and governmental rationalities of the state and judiciary contain a variety of grids of 'recognition' (Gosh 2006, p.503). These relations produced and reproduced marginal

communities and dictated spatiality. While Chatterjee (2006) roots the subaltern governmentality in recognition, negotiation, and dialogue (elaborated on in Chapter 7), Ghosh (2006) roots it in coercion and violence. I analyse how the land-claiming farmers navigate within environmental governance through recognition, negotiation, and dialogue by claiming land and maintaining paperwork along with tenant farmers who make use of these negotiations. However, I recognise that these processes are ridden with coercion and violence creating multiscale vulnerabilities, dispossession, and exclusion. This not only brings the socio-political aspect of environmentalism to the forefront but also grounds the conversation within the complexities, tensions, and layers within. The flexibility and dynamism of power relations at play here are focused on.

While the land ownership in the Chilla *Khadar* floodplains remains contested, claims on land and the governance structure followed stem from legitimacy. Only land-claiming farmers enjoy this legitimacy partially. This dominant governance structure clearly demarcates the large and tenant farmers into two distinct groups based on class.

However, class does not operate exclusively. Rather it operates in an intersectional way with various other factors such as education, religion, gender, region, and ethnicity. The interplay of all these factors dictates the exclusion and vulnerabilities of all farmers and fisherfolk. In the chapter, I analyse how a claim on the land in the process of purchasing, renting, and donating is clouded by religion, how the entire occupation of fishing is considered 'less than' due to its caste connotation, how regional slang ('Bihari') and ethnicity (Jat and Gujjar) play a role in causing exclusions and how layered citizenship 'maximises the difference'. Multiscale vulnerabilities due to this are thus faced by the marginalised shaping their environmentalism and resistance analysed in the coming chapters.

# Chapter 6 Relating the nature of environmentalism of the farmers and bio-diversity parks

## 6.1 Introduction

In the previous chapter, the political ecology of farmers was established as messy, complex, and tense. This chapter answers the second research question, *What is the nature of the environmentalism of the farmers and how does this relate to the environmentalism practised in the rejuvenated Yamuna initiative?* This chapter frames this analysis through the lens of the politics of knowledge to explore how the socio-political tensions shape the environmentalisms of the farmers within Chilla *Khadar* in relation to the restoration and rejuvenation attempts such as the creation of the bio-diversity park. The interaction between the environmentalism of the bourgeois and the dispossessed shaping the Yamuna waterscape is analysed through the political ecology framework.

As explored in Chapter 2, various people occupy the same space but use and understand it differently (Zimmer 2017, p.594). Lived experiences are not considered separate and function within the politics, geography, and social structures of the external world. Knowledge is produced, shared, and transformed in culturally specific ways. By being blind to this multiplicity, dominant techno-science projects inherently isolate and marginalise many forms of knowledge. This chapter analyses these knowledges by putting into dialogue the environmental practices of the Chilla *Khadar* farmers to the ones driving the creation of the bio-diversity park. The possibility of their coexistence (even though dictated by various power dynamics and trade-offs) is analysed. This positions the farmers as the solutions rather than the problems making room for them within the imagined waterscape.

Through this situated analysis in the chapter, I contribute empirically to the environmental governance literature by unpacking how knowledge is centralised by violently erasing multiplicity. This approach to environmental policies ends up causing further socio-ecological segregation. This analysis requires a theoretical expansion of the environmentalism of the bourgeois and the dispossessed as they separately fail to present a holistic account. In this chapter, the environmentalism of the bourgeois theory is able to capture the unjust creation of a limited environmental imaginary of the bio-diversity parks

and the environmentalism of the dispossessed is able to capture the power dynamics of knowledges and their erasure.

This is done by establishing aspects of the bio-diversity park through data from official documents by the state and the judiciary. This is related to the environmentalism of the farmers through data from interviews, conversations, and life histories of farmers along with filed observations and illustrative ethnography. Data from interviews with various other actors such as environmentalists, upper-middle-class *Dilliwale,* and state employees such as DDA are also used.

The chapter first analyses the overlaps between environmentalisms of the farmers and the bio-diversity park specifically regarding water quality, floodplains, vegetation, and recreation. Then political ecology of trade-offs within the creation of bio-diversity parks is analysed positioning the farmers as part of the solution.

## 6.2 Relating the nature of environmentalism of the farmers and bio-diversity parks

Analysis of people's environmental engagements highlights relationality and expands the focus toward social contexts of environmental knowledge and practice (Hviding 1996, p.181). This section relates the nature of environmentalism of farmers to that of the bio-diversity parks. Here data for bio-diversity parks is mainly composed from the Expert Committee report (2014) as it clearly connects its theoretical foundations and formulates them into the list of practical aims. While all points such as improving water quality, conserving the floodplains, and maintaining vegetation are mentioned as "*major and most important functions of floodplains*" (Expert Committee report 2014, p.46), I also include the recreational aim of the bio-diversity parks in the analysis as it is later mentioned in the report and highlighted as important within various other documents dictating restoration and rejuvenation of floodplains such as YMC (2020), *Namami Gange* (2020), *Namami Gange* and NIUA (2021), and DMPD41 (DDA 2021). Data for the environmentalism of the farmers is taken from semi-structured interviews with land-claiming and tenant farmers and fisherfolk along with observations within Chilla *Khadar*.

For the following analysis, along with materiality, the focus is on 'thoughts about space'. The aim is to investigate how materialised space is conceptualised, imagined, and used (Soja

2010, p.101). This gives meaning to a 'non-place' making it a 'cultural landscape'. This section is vital to highlight various knowledges as often, farmers are seen as uneducated, unknowledgeable, and dim, as discussed in Chapter 5. This is expressed by upper-middle-class *Dilliwali* (5),

> *"लोगों को वैसे भी कुछ नहीं पता होता। कोई है ही नहीं इन्हें बताने के लिए। school भी नहीं जाते ये लोग। अगर जाते हैं तब भी इन्हें कुछ समझ नहीं आता। स्कूलों में ये सब वैसे भी नहीं पढ़ते। Private school भी नहीं बताते ये सब। Government school तो भूल ही जाओ।*
>
> *(They (farmers) do not know. There is no one to tell them. They do not go to school. Even if they go, they are not going to understand. Schools are not giving proper education. Even private schools do not tell all this. You can leave out the government (schools)).*"

Here epistemologically, situated knowledge and lived experiences are completely erased. Only institutionalised school education is recognised as valuable. I encountered this line of thought throughout my fieldwork. The section below attempts to document some of the knowledge bases drawn from the lived experiences of farmers. This is important as the narrative of pollution caused by farmers erases their lived experiences of ecosystem degradation, loss, and relocation. It leads to the devaluation of both humans and non-humans.

However, it is important to note here that the lived knowledge of the farmers is not being considered 'traditional', 'pure', or 'correct'. It is neither being considered linear nor held by all farmers as a unit. As stated in Chapter 2, Richard (1993) sees local agricultural practices as context and time-specific rather than an absolute 'indigenous knowledge system'. In addition, Turnhout (2018) states that all knowledges must be understood as situated and partial. Nonetheless, these discussions place the livelihood, residence, and leisure of the farmers within the floodplains. The point is that the heterogeneity and dynamic nature of voices and worldviews are recognised in this chapter.


Figure 19. Biodiversity Park and farms in Yamuna floodplains, images by Shivani Singhal, August 2021.

Figure 19 shows two images. The one on the left is from the South Delhi Biodiversity Park. On the right are farms in Chilla *Khadar*.

Within multiple interviews conducted, DDA employees describe plantations on the floodplains as one of a kind pioneer effort. The 'wild' and 'untouched' landscape is slowly conquered by the trial-and-error method. The river swelling in the monsoon is seen as a nuisance, a force that destroys and uproots, something to fear. They apologetically describe the floodplains as lacking basic needs such as electricity, toilets, and seating areas due to tight surveillance by the NGT. The changes in the floodplain are described by them in terms of aesthetics, development, and progress.

On the other hand, the farmers already show a familiarity with the landscape by describing the ecological cycle of the river, its benefits, and the growth of the vegetation in various interviews. The river is described by them as nourishing and fulfilling. Something to respect,

coexist with and make way for. The floodplains are described as wholesome, open spaces to escape the congested city with a cool breeze and sustaining crops. The changes are described as a loss of lifestyle, livelihood, culture, and leisure. Here environmentalism is not just about singular identity or livelihood (Mohan and Stokke 2000, p.259). It is about identity, livelihood, development, aesthetics, values, ecology and much more. This is elaborated on below.

As described, the knowledge to create bio-diversity parks is currently being met by technical expertise from specifically national and international institutions. These work to restructure urban spaces apolitically, in the process marginalising and excluding some groups (Zimmer 2017, p.597). However, spatial meanings are formed by various environmental knowledges underlining various epistemologies. Biodiversity then does not belong to technocentric science but is a historically produced discourse (Escobar 1998, p.54). This chapter claims that when analysed through the environmentalism of the dispossessed, the farmers are recognised to have distinctive spatial information about *Khadar*. They work with the unique parameters of the area guided by constant environmental observation, close perception, practical wisdom, and experience (Liaoa and Chan 2016, p.2). There is a need to use non-institutionalised knowledges in such a way as to not undermine cultural identity (Choy et al. 2016, p.453). Therefore, farmers have the potential to contribute to and guide sustainability solutions. This is demanded by the farmers themselves and is explored in the next section.

### 6.2.1 Improve water quality

The two main aims of the construction of a biodiversity park on the Yamuna flood plains regarding improving water quality in the Expert Committee report (2014, p.46)) can be recognised as,

- Maintenance of good stream habitat
- Filtering sediments, chemicals, and nutrients from upslope sources, and thereby improving water quality.

This section explores how the environmentalism of farmers in Chilla *Khadar* relates to these aspects.

Problems are culturally constituted in complex ways (Hennessy 1993, p.69). Like many other farmers, tenant farmer (7) denied that the Yamuna is polluted. This was a common thing I heard in *Khadar* which surprised me as all techno-scientific documents pointed otherwise. On seeing that I failed to understand, tenant farmer (7) expanded,

> *"Yamuna गंदी कहाँ है। बारिश के महीनों में साफ़ होती है। बाक़ी के महीनों में Yamuna गंदी हो जाती है। Lockdown में देखते कितनी साफ़ थी।*
>
> *(The Yamuna is not polluted. During the monsoon, it is rejuvenated. It is the rest of the months when it gets polluted. You should have seen during the lockdown how rejuvenated it was.[48])"*

Similarly, tenant farmer (13) when I asked about the pollution in the river stated,

> *"गंदगी का क्या है? जब बहाव ज़्यादा होता है तो गंदगी बह जाती है।*
>
> *(What about pollution? The flow keeps on increasing and decreasing. When the water is more all the pollution is carried away)."*

This statement has a vital description of the way the farmers view the river and the pollution and is depicted in Figure 20 below. There is an epistemic difference between 'the Yamuna *is* polluted' and 'the Yamuna *becomes* polluted'. The first statement marks the inherent physical permanence of pollution. However, the second statement marks one, temporality and two, invokes accountability.

[48] In April 2020, many stretches of the river in Delhi were reported as pollution free. This was due to the closure of industries and the increased water flow.


Figure 20. Increase in flow during monsoon months (June-September) resulting in a decrease in pollution depicted by an increase of DO (dissolved oxygen) and decrease of BOD (biochemical oxygen demand), adapted from YMC (2020, p.74).

This is important as the idea of the permanence of the river being polluted can be seen by Yamuna *Rakshak* (2) who bluntly asked after inquiring about details about the PhD and prospects,

> *"आप ये नदी के बारे में क्यों पढ़ रहे हो? वो तो कभी साफ़ होनी नहीं... ये सब छोड़ो। आप UPSC की तैयारी क्यों नहीं कर लेते? इतने time में तो वही हो जाएगी, अच्छी सरकारी नौकरी मिल जाएगी। मैं खुद सरकारी exam की तैयारी कर रहा हूँ। रोज़ किताब लेकर आता हूँ यहाँ बैठे कर पढ़ने के लिए।*
>
> *(Why are you researching about the river? That is never going to get rejuvenated. Leave all this. You study to clear UPSC exams[49]. That will also require the same length of time as a Ph.D. You will get a good government job. I*

[49] Union Public Service Commission (UPSC) are federal-level public sector employment exams.

*am also studying to clear government job exams. Every day I bring my books with me to study).”*

Here the Yamuna *Rakshak* completely dismissed the possibility of the river ever being rejuvenated. Similar assumptions of the Fisheries officer were discussed in Chapter 5. As there is no possibility, even researching the topic seems worthless when for the same time I could be preparing for UPSC to become a governmental officer, a post synonymous with rank, power, money, and prestige.

When solutions are formed with the first epistemology, the creation of biodiversity parks without farming makes sense as water pollution is seen as a permanent fixture that demands solutions be built around it. Strategies now assume that river pollution is not going to decrease. Through this, ponds within the South Delhi Biodiversity Park are built away from the river to have the least interaction of water through ground and surface water. DDA employee (3) explained the reasoning for the position of the two ponds,

*“हमने soil के test करे। नदी के पास की मिट्टी खराब है। इसीलिए हमने pond दूर बनाया है।*

*(We tested the soil. The soil near the river was bad. So, we built the ponds so far away).”*

Here the soundness of the technicality of the decision is not being debated. However, this reveals the long-term perception of river pollution at the highest levels of the state and the judiciary. The river itself becomes a problem as it is seen to be inherently polluted permanently. Nature now must be separated from society due to health reasons. Lefebvre (1991) calls this a ‘complex of illusions’ which reproduces its own conditions of existence. The institutionalised knowledge seeks to master nature, in the process destroying it and before that misrepresenting it (Lefebvre 1991, p.108).

However, through the second epistemology of the river *becoming* polluted the temporality of the pollution is highlighted. This acknowledges the simple fact that the river itself is not the problem. The conceptual separation of the pollutants from the river becomes important especially when many *Dilliwale* have not seen the river to be full of pollutants. The upper-middle-classes saw the rejuvenated Yamuna for the first time in decades in 2020 during the lockdown and that opened their imaginaries its possibility. Indian Express newspaper (2020)

headlines read, "'Never saw Yamuna so clean before': Images of blue waters in river go viral amid lockdown". Imagination and hope are radical (Gonda et al. 2021, p.2). This conceptual separation sparks the possibility of the river not being polluted. It not only structures solutions differently but also raise further important questions such as if the river is *becoming* polluted then who is polluting it? How? Why? And so on. In other words, the discourse gets politicised. The importance of this politicisation of the debate is analysed in the next chapter.

### 6.2.2 Conserving the floodplains

The three main aims of the construction of a biodiversity park on the Yamuna flood plains regarding managing the floods and floodplains in the Expert Committee report (2014, p.46) can be recognised as,

- Moderation of flood peaks through temporary retention of water and spread of water.
- Enhancement of groundwater recharge in larger areas and improvement of groundwater quality.
- Provision for fresh sediments with high fertility.

This section explores how the environmentalism of farmers in Chilla *Khadar* relates to these aspects.

One, the state sees the river as a hub of disease and risk in terms of floods. Here floods are referred to as something that causes havoc and destruction. The wildness of nature is emphasised. A DDA employee (2) described the flooding astonishingly,

> *"पूरी जगह में 4 feet पानी भर गया था। कुछ पौधे मर गए। बाक़ी अभी भी लगे हुए हैं। अब हमने bamboo की huts और रास्ते भी बना लिए हैं। मुझे उम्मीद है कि इस monsoon में उन्हें नुकसान नहीं होगा। हमने NGT से पूछा कि क्या हम toilets और electricity के pole भी लगा सकते हैं, लेकिन permission नहीं मिली। अब हम देखते हैं कि सब कुछ ख़राब हो गया होता। ये सब देखा हमने और अब हमें पता है कि कौन से पौधे ज़िंदा रहते हैं। अब हम वही लगाएँगे।*
>
> *(The area was filled with 4 feet of water! Some of the plants died! Now we have constructed bamboo huts and pathways too. I hope they are not damaged this monsoon. We asked the NGT if we could also add toilets and electricity poles to the area, but our request was denied. Now we see that everything would have*

*been destroyed. Anyway, some of the plants survived now at least we knew which plants to grow)."*

Technically, the biodiversity park is created by evicting farmers to create space for the river. However, the river waters coming into the floodplains are seen as a matter of danger, fear, and destruction by the DDA employee (2). Monsoons are times when plants, grass, brick walkways, and bamboo huts are all in danger of being damaged. Thus, the emphasis can be seen to be the provision of recreational facilities and not meet the ecological aims mentioned above.

However, farmers swear by the rejuvenating capacities of the river water filling the floodplains during monsoons and are familiar with it. They honour and recognise the importance of cyclic changes in nature. In terms of floods, a land-claiming farmer (5) explained the rejuvenating qualities of silt,

*"हम बाढ़ में नहीं मानते.. पानी चढ़ता है और वो ज़रूरी है।*

*(We do not consider it as floods… The water rises and it is important that it does)."*

Here floods as described as necessary for the fertility of the land as the waters bring in minerals that are good for the soil and help the crops immensely. Ontologically, the river and the floodplains are not seen as separate. This shifts the river swelling up during the monsoon from being floods to being natural cycles. The phenomena are described as the natural increase and decrease of water.

A similar sentiment was expressed by the tenant farmers. This was surprising as while land-claiming farmers do not live in the floodplains and hence do not have to move during the monsoon, tenant farmers do. Their crops are destroyed, and their huts get washed away. However, during my fieldwork, most of the tenant farmers did not complain about this. While uncomfortable, they were prepared to move during the monsoons when the Yamuna water increases. There are several reasons for this. One, the river water had not entered their part of the floodplains for many years. Two, the state erects tents nearby and provides

all meals till the water level goes down. Therefore, they have institutional support to fall back on.

Nonetheless, I am not dismissing the concerns of DDA employee (2) offhandedly here and rather the dangers of the river water rising need to be acknowledged. Due to their dynamic nature, floodplains also become inherently risky. Their risk increases even more due to soil pollution and poor water quality in the river. While the land-claiming farmers continue living in built-up urban areas, the tenant farmers do have to vacate the area during monsoon. Thus, the risks get unevenly distributed. Inequality is rooted in the spatial distribution of risk playing across space and time (Walker 2009).


Figure 21. Tenant farmers leave the floodplains during the monsoon in 2022, Images by Urmila Singhal, September 2022.

In September 2022, tenant farmers had to leave the floodplains during the monsoon as the water level rose. This was repeated in July 2023 even more intensely. In this section, I focus on the experiences of farmers in 2022 as data related to 2023 is still being collected[50]. While the government did not provide any warning to the Chilla *Khadar* area, through internal connections upstream, the farmers were able to get information about the increase in water level. As a result, while their huts were submerged, they were able to vacate the area with all their belonging as can be seen in Figure 21.

The Delhi government provided the farmers with temporary tents and meals. However, all farmers did not report being able to access the meals. These farmers were either served by various NGOs or they cooked their own meals. Most of the farmers in the Chilla *Khadar* area did not portray financial distress due to the provision of this support, availability of (minimum) savings and continuation of various other earning sources due to a diversity of income. However, many other areas reported distress, loss of material possessions and income.

Two, the above discussion shows that the relationship of farmers with land keeps on changing with seasons and time. Historically, following the river cycle, entire villages used to move with the river. With the river and the floodplains, the boundaries are not fixed and depend on the water flow. This change of river course over the years can be seen in Figure 22 below. These factors are accounted for by the farmers for land management.

[50] The Water Hub book '*Pushing the paradigm of global water security: Transnational perspectives for the next generations*'. (2024) IWA Publishing will cover this experience.

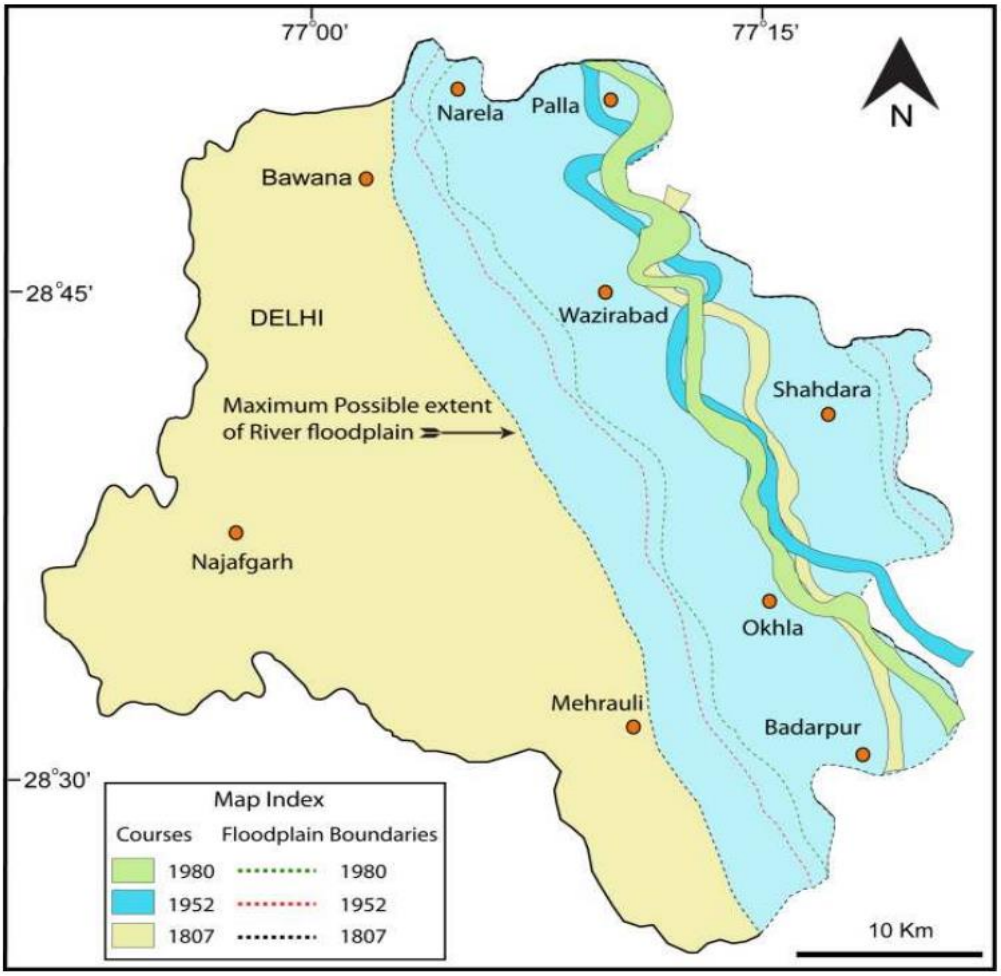


Figure 22. Change in the course of the river over the years, (Khan and Bajpai 2014).

The above two points about the understanding of floods and the land epistemologically also change the understanding the of river and the floodplains themself. This shows an understanding of the river and its floodplains as one system, as discussed in Chapter 1. Environmentalist (3) points this out,

> *"Question यमुना का नहीं बल्कि floodplain का है। लोग सोचते हैं कि यमुना पानी तक ही है। लेकिन यमुना floodplain भी है। ...Problem यह है कि आप नदी को कैसे देखते हैं... नदी केवल नदी में बहता हुआ पानी नहीं है, बल्कि इसके चारों ओर भी है। यह एक monsoon fed नदी है। Floodplains पानी recharge रखता है। उन तीन महीनों में नदी अपना विस्तार कर लेती है।*
>
> *The question is not of the Yamuna but of the floodplains. Most people think that the Yamuna is limited to the waters. But the Yamuna is also the floodplain. … The problem is how you look at the river itself… The river is not just the water flowing in the river it's also the land around it. It's a monsoon-fed river. The floodplain holds water recharge. The river expands itself in those 3 months."*

### 6.2.3 Maintaining vegetation

The two main aims of the construction of a biodiversity park on the Yamuna flood plains regarding maintaining vegetation can be recognised in the Expert Committee report (2014, p.46),

- Stabilization of banks by the vegetation and maintaining channel form
- Maintenance of high biodiversity and high production of natural resources.

This section explores how the environmentalism of farmers in Chilla *Khadar* relates to these aspects.

The plantation in the South Delhi Biodiversity Park is being done on a trial-and-error basis as the DDA is doing this for the first time, learning from situated experiences. The judicial expert explained the shortage of expertise in the DDA to carry out the biodiversity plans.

> *"They have deployed people who are only programmers. They do not have enough knowledge. So, you have to build the teams."*

DDA employee (3) confirmed this shortage of expertise. Further, I inquired if inputs from farmers could be valuable precisely because of this. However, this question was dismissed stating that,

> *"Progress हो रही है और जो पौधे उगाए जा रहे थे वे commercial नहीं थे। कुछ देसी पौधों को हटाया जा रहा है और वो पौधे उगाए जा रहे हैं जो कम पानी लेते हैं। यह information कई institutions से हम ले रहे हैं। Yamuna Monitoring Committee हर चीज़ पर नज़र रखती है।*
>
> *(Progress is being made already and the plants being grown were not commercial. Some indigenous plants are being removed and more ecologically suitable plants are grown that take in less water. This information is being taken from multiple technical institutions. Everything is being overseen by the Yamuna Monitoring Committee)."*

Again, like the above discussion, bio-diversity parks are being created in a techno-scientific top-down format. The top-down planning approach conducts a trial-and-error method to understand the soil and changing river patterns with the assumption that the land is untouched and has no anthropological history.

However, interaction with the farmers negates this completely. The waterscape under the farmers is produced by clearing bushes and reclaiming swampland to produce agricultural lands (Follmann 2014; interviews with farmers). During a visit, tenant farmer (6) asked me what was happening on a piece of land nearby. I relayed the news of a plantation drive in which 100 tree saplings had been planted a few months ago under the supervision of the local religious leader. The idea was to create a green cover on the area and build a platform using natural products to conduct cultural activities and lectures. For the management of the place, a caretaker from the urbanised Chilla village had been hired. The tenant farmer (6) asked me what had happened to the plants. I replied that they had all died within a month or two. She smiled and explained that the soil was too sandy. The land had earlier been offered to the tenant farmers, but they had examined the characteristics of the soil and had rejected the steep offer. Boyce (2002, p.104) states that trees and crops are products of the soil. The tenant farmer explained that even though the soil was sandy it could still be used to grow plants. But this would require a lot of care, hard work, and application of water. So, the lone urban caretaker who was merely watering the trees every few days would never have been enough for the trees to survive.

Along similar lines, a land-claiming farmer (3) described how there is a need to take care of saplings like they were kids to keep the area green.

> *"जब पेड़ लगाओ तो 4-5 साल तक तो उसकी रोज़ देखभाल करनी पड़ती है। जड़ पकड़ने में इतना समय लगता है। ये लोग (government employees) करेंगे इतना? नहीं। तभी तो देखो ये जितने भी पौधे लगाते हैं सब मर जाते हैं... यहां जितने भी पेड़ हैं बड़े-बड़े सब हमारे बाप दादा ने उगाए हैं।*
>
> *(When you plant a sapling, you have to take care for 4-5 years till it takes root. Will these people (government employees) do this? No. That is why all the plants on the roadside die… whatever big tree you see here was planted by my forefathers)."*

While recognising the importance of techno-scientific institutional inputs is important for small- and large-scale planning, situated knowledge is acknowledged as important for micro-planning making the process transdisciplinary. While the farmers seem to be aware of the details of growing plants and the specific care required, their knowledge is not considered at all by various official projects (Interview with DDA officer (3)). This links to the discussion in Chapter 2 about the politics of Knowledge. Whose knowledge is recognised is a political

matter (Gururani 2002). Here both the state and the farmers are learning through situated knowledges. Moreover, the farmers are modifying the floodplains by incorporating techno-scientific methods (Altieri 2002, p.5). Thus, it is not the knowledge itself but the recognition of the actor that is an important differentiating factor here. In other words, while roughly coming from similar epistemology, it is only the institutionalised actor (DDA) that is seen as worthy of holding knowledge as opposed to the non-institutionalised actor (farmers). Thus, this is further alienating the dispossessed from the issue by being recreated within the dominant hard science conservation rhetoric (Escobar 1998, p.61).

Unsurprisingly, projects such as developing plant nurseries and compensatory forestation on the floodplains have failed completely due to the unfamiliarity of the DDA with the floodplains (Sharma 2020). A recent example of this failure is that chinar trees and cherry blossoms have been planted for beautification to make Delhi a 'city of flowers'. However, these are accustomed to much cooler temperatures and so are very likely to not survive the excruciating Delhi heat (Hindustan Times 2023). This is striking as one, nurseries run by farmers are currently being evicted from the floodplains and two, the state-run nurseries are failing while the farmers have been able to manage theirs for years. Interestingly *Paramparagat Krishi Vikas Yojana* (Conventional Farmer Development Scheme) (2017) encourages organic nurseries to be run by farmers. This shows that nurseries are seen as a nature-based solution rather than a polluting factor. Therefore, the evictions instead of being based on ecology are based on centralising the system, as discussed in Chapter 4.

Market-based conservation instruments such as compensatory afforestation have deep roots in colonial history (Benabou and Harms 2021). The floodplains are often used by various governmental agencies such as the Department of Forest and Wildlife, the Government of National Capital Territory (River Rejuvenation Committee 2020), Delhi Metro Rail Corporation (DMRC) and DDA (NGT 2021) for this. The Delhi Preservation Tree Act (1994) states that against 1 felling tree, 10 saplings are to be planted (River Rejuvenation Committee 2020). For these 'image-oriented' (Jain and Kaur 2004, p.199) environmental solutions 'wastelands' become low-hanging fruit. Globally, and especially in densely populated countries, afforestation comes almost systematically at the expense of previous land users, especially in the context of insecure land rights (Benabou and Harms

2021, p.334). *Main Bhi Dilli* (I am also Delhi) Report (2022) marks this phenomenon at the Yamuna floodplains.

The point is that current activities such as farming, fishing, and nursery are all being taken away from the marginalised and being diminished and centralised. Therefore, the narrative of pollution is being used to take over land and occupations.

### 6.2.4 Recreation

One of the main attractions of riverfront rejuvenation is making the river accessible to the public "*for recreation in a manner that it avoids construction of paved (pucca) paths and does not cause any kind of pollution*" (Expert Committee 2014, p.7). Green leisure spaces are important. However, there are wide variations in how different cultural groups may enjoy them (Wijsman and Berb´es-Blazquez 2022, p.380). Borrowing from gentrification literature, access to these conserved and protected green spaces is limited to the upper-middle-class (Checker 2011). The reason for this segregation was explained by a DDA employee (2) explaining why farmers cannot/are not allowed in parks,

> *Q- Who visits these parks more? The middle class or the farmers?*
>
> *DDA Employee (2)- "Middle class".*
>
> *Q- Why?*
>
> *DDA Employee (2)- "Upper-middle-class लोग powerful होते हैं और IAS जैसे position पर होते हैं। वे इन जगहों पर गरीब लोगों को नहीं देखना चाहते। वे गार्ड से कहते हैं कि इन लोगों को अंदर आने नहीं दिया जाए।*
>
> *(Upper-middle-class people are powerful and hold positions such as IAS (Indian Administrative Services). They do not want to see poor people in these places. They tell the guard that these people should not be allowed to enter)."*

This shows how green leisure is practised by the upper-middle-class through segregation where farmers become 'flawed consumers' (Clarke 2003). Brosius (2010) states that the modernisation process institutionalises experiences such as leisure by making them available for consumption. Along with this, consumption does not create homogenous identities. A new consumption identity emerges which plays a role in one's position within the power dynamic axis with other traits such as gender, class, caste, religion, sexuality, ability and so on (Brosius 2010, p.335).

This infrastructure violence is structured, historical, and institutional (Rodgers and O'Neill 2012). However, the deliberate apolitical framing underplays the power disparities and strengthens the established hierarchy further (Hanieh 2016, p.33). The creation of biodiversity parks thus rationalizes unequal access to both nature and leisure. Like other green public spaces in Delhi (Baviskar 2020), this too will not be open to all public and will favour upper-middle-class modes of consumption. In other words, the parks are designed to be violent (Rodgers and O'Neill 2012).

On the other hand, fieldwork interactions point to how for the farmers' leisure and livelihood are interconnected as they work in fields enjoying the *खुली हवा* (open air). A land-claiming farmer (LCF)(5) explained how he has a house in Chilla village, but he spends most of his day working in the fields in *Khadar* as he feels घुटन (suffocation) in the village.

> *LCF (5): "हम तो रोज़ सुबह और शाम यहीं बैठे रहते हैं। ताज़ी हवा में, खुले आसमान के नीचे, पेड़ों की छाया में बहुत अच्छा लगता है।*
>
> *(Every morning and evening I come to the farms and sit here due to the fresh air, open sky, under the tree shade. It feels very nice)."*
>
> *Q: But you do not live here, right?*
>
> *LCF (5): "रहते तो हम चिल्ला में है।* वहाँ पक्का घर है।
>
> *(We live in Chilla (urban village). There we have permanent house)."*
>
> *Q: So you like living there?*
>
> *LCF (5): "वहाँ सारी व्यवस्था है। School, market, hospital। रहना तो वहीं चाहेंगे हम। हर रोज़ यहाँ न आओ तो मन भारी हो जाता है।*
>
> *(All the facilities are there like school, market, and hospital. I prefer living there. However, if I do not come here (farms) every day then I start feeling blue)."*

While the farmer enjoys the open fields, he values having a पक्का house (permanent structure). This also might be important as he doesn't have to worry about moving during the monsoon as discussed above. This description points to the farmer enjoying leisure, livelihood in the *Khadar* and permanence in the village.

In contrast, tenant farmer (8) talks about the extreme weather conditions they have to face every day.

*"हमारी चमड़ी मजबूत हो गई है यहाँ रहकर। इतनी गर्मी, सर्दी, बारिश का सामना करना पड़ता है। इतने मोटे मच्छर घूमते हैं, बारिश के महीने में तो बहुत सारे। अगर अमीर लोग यहाँ रहने की कोशिश करें तो वो जिंदा नहीं बच पाएँगे।*

*(Our bodies have become strong living here. We have to face heat, rain, cold everything. The area is full of such fat mosquitos, especially during the monsoon. If rich people, try living here they will not be able to survive)."*

Tenant farmer (6) also states the same but frames it differently.

*"हम यहाँ रहते हैं। Yamuna माँ ने हमें कभी कुछ होने नहीं दिया। लोग रोते रहते हैं कि इतनी गर्मी है! इतने कीड़े हैं! साँप हैं! हम तो कभी बीमार नहीं पड़ते। किसी साँप ने मुझे नहीं काटा। मैं इतनी बार नदी पार करती हूँ।*

*(We live here. Yamuna maa never hurts us. (Rich) People say it is so hot! So many insects! Snakes! But we do not get sick. No snake has ever bitten me I have crossed the river so many times)."*

These differing views depict various experiences and narratives. While the land-claiming farmer is able to enjoy leisure on his own terms in *Khadar*, the tenant farmers can be seen to recognise the hardships and adapt themselves.

Furthermore, a tenant farmer (7) humorously expressed,

*"सुबह बहुत लोग घूमने आते हैं यहाँ। ज़ोर-ज़ोर से हँसते भी है। मैं तो डर गई थी। फिर मैंने पूछा तो पता चला कि ये बड़े लोगों का सेहत बनाने का तरीका है। मुझे तो समझ नहीं आता। हमें तो ये सब नहीं करना पड़ेगा। हम खेतों में काम करते हैं और सही रहते हैं।*

*(In the morning a lot of (rich) people come here for walking. They laugh very loudly[51]. I got scared initially listening to the noise. Then I asked around and was told that this is an exercise method of the bourgeois. I do not understand all this. I work in the farm and look I'm healthy)."*

This shows that there are already paths being used by the upper-middle-class *Dilliwale* to regularly visit the river and the floodplains in the presence of the farms. The environmental imaginary of leisure spaces beside farms is already a reality. However, the number of the

[51] A common technique of exercise called laughter yoga, usually practised by the upper-middle-class Delhiites in parks or open green spaces.

upper-middle-class *Dilliwale* using these paths is limited. Most prefer to do so from a safe distance, for instance from the small under-construction bridge (walking) or the highway (in two or four-wheelers).


Figure 23. Upper-middle-class residents enjoying leisure activities from bridges, Images by Shivani Singhal, August 2021.

These images in Figure 23 show how the upper-middle-class *Dilliwale* enjoy the river and its floodplains. Baviskar (2020, p.144) states that "without the highway, there would be nowhere to stand and nothing to see." While the bridges go over the floodplain, upper-middle-class *Dilliwale* prefer to enjoy the view from the exclusive bridges. These areas are islands of supposedly orderly spaces. This illusion of order is created in these areas as it is only the rich who break laws here such as driving violations and throwing materials in the river from the bridge. People on foot or bicycles are not allowed to enter these stretches. All

advertisements in the area (such as in image 3 of apartments in gated housing communities) target the rich. Ironically, this plastic material of the advertisements selling apartments is used by the farmers to protect their roofs during monsoon.

The point here is that while there is a demand to enjoy the intrinsic values of the river and the floodplains, the demand is to specifically enjoy them as exclusionary spaces. This, environmental imaginary through bourgeois environmentalism is driving the environmental policies of evicting farmers and constructing Biodiversity Parks.

### 6.2.5 Relating the nature of environmentalisms

The analysis of the four aspects, improving water quality, conserving the floodplains, maintaining vegetation and recreation discussed above have been summarised in Figure 24 below. This empirical contribution exploring the situated interaction between the nature of environmentalisms of the bio-diversity park and the farmers is vital to understanding how the legitimisation of limited knowledges create socio-ecological dispossession. For this empirical research, I use bourgeois environmentalism theory to analyse the nature of environmentalism of the bio-diversity parks which through an apolitical framing create segregation, dispossession, violence, and displacement. On the other hand, through the environmentalism of the dispossessed theory, I analyse the nature of environmentalisms of the farmers that politicise the discourse of river pollution by questioning the ontology and epistemology of the rejuvenated Yamuna initiative. This analysis extends the theoretical boundaries to build a more holistic picture.

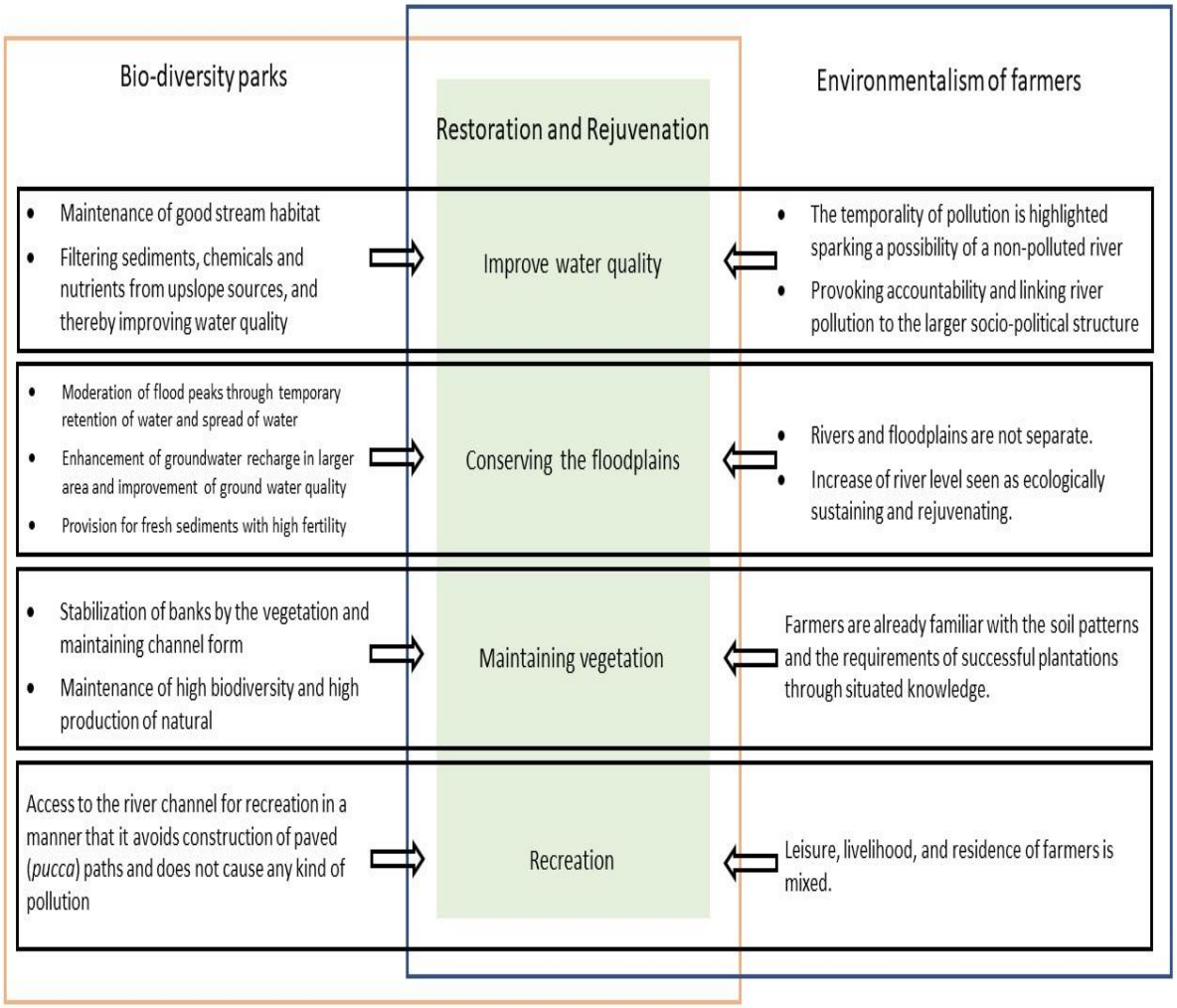


Figure 24. Relating environmentalism of farmers to bio-diversity parks, created by Shivani Singhal.

The left column of Figure 24 summarises the aims of bio-diversity parks recognised by environmental experts of the National Green Tribunal (2014) to restore and rejuvenate the river and floodplains discussed in the above sections. In the right column, how the farmers relate to these aims leading to ecological restoration and rejuvenation have been mentioned. These do not seamlessly unite and are laced with tensions and complexities. The point here is that one, while farmers are being tagged as a problem and being evicted to create bio-diversity parks, it is important to recognise how the environmentalism of the farmers and the aims of the bio-diversity parks relate to each other and open space for an environmental imaginary where both feed each other.

Two, the ethnographic fieldwork interactions show that the farmers have already been following forms of restoration and rejuvenation elements. As this has not been

acknowledged within the creation of bio-diversity parks, the situated knowledge is merely incorporated into the top-down approaches, without the significant engagement of the farmers, alienating them from the issues further. Therefore, rather than merely recreating situated knowledges within dominant structures, the need is to drive the fundamental and transformative restructuring of schemes.

This analysis opens up the singular framing of environmentalism focusing on apolitical nature to incorporate a multiplicity of problems and solutions. Doing so recognises the rejuvenated Yamuna initiative as deeply politically embedded with trade-offs, power relations and violence. This multiplicity of problems, solutions, knowledges, and imaginaries have been elaborated on in the next section.

## 6.3 The multiplicity of problems and solutions

The above discussion shows that both the problems and solutions can be understood through multiple discourses and frames. However, the dominant knowledge power constellations create concrete top-down strategies (Escobar 1998) as discussed in Chapter 2. Therefore, the solutions become singular and hierarchically technical, external to the social situations (Zhouri 2017, p.449). Upon being asked the question of why the Yamuna is still polluted, an environmentalist (2) stated,

> *"कोई भी problem हो, solution ढूंढने के लिए पहले problem को समझना होगा... government अभी तक problem को समझ नहीं पाई है। जबकि उन्होंने उन issues पर focus किया है जो उस priority के लायक नहीं थे जिन्हें वैसी priority दी गई है।*
>
> *(Any problem, to find a solution… You have to first understand the problem… The authorities have not yet understood the problem. Whereas they have looked at aspects which do not deserve the priority that has been given)."*

The singular understanding of the problems and solutions of river pollution was encountered by me throughout the fieldwork, especially in communication with state representatives. Upon bringing up questions of justice, often I was cut off even before the completion of the question and was in turn asked,

> *"आप किसान के मुद्दों पर खुद को क्यों परेशान कर रहे हैं? आप अपनी Yamuna pe PhD करें।*
>
> *(Why are you bothering yourself with the issue of the farmers? You do your PhD)" Yamuna Rakshak (2).*

*"आप किसानों और मछुआरों को बीच में क्यों ला रहे हैं? आप सिर्फ़ नदी पर ध्यान क्यों नहीं दे रहे हैं?*

*(Why are you bringing up the farmers and fisherfolk and not concentrating on the river?)" Department of Animal Husbandry, Dairying and Fisheries employee.*

Thus, the problem and the causes are stated in a two-dimensional, linear, centralized, hierarchical, tame, and straightforward fashion. This limited epistemic model fails to address the larger socio-ecological problem (Jasanoff 2010). It shifts the discourse from systemic causes of the crisis to technical solutions successfully masking the winners, losers, and rights violations. It is inherently reactionary and dictates who is considered an 'expert'.

This was reflected in my conversation with a technical environmental expert involved in the 'Yamuna Matter'.

*Technical expert: "We emphasised that in the name of riverfront development, you should not encroach upon the area of the floodplain. They (judges) agreed that it should be rejuvenated instead and that all the activities done by DDA or any other sub-party should not be allowed. They only allowed activities which do not take up the rightful area of the river. They also made space for trade-offs some kind of temporary activity where people can go and enjoy the river. Now that this is done in Delhi there is a precedent now…You do not know how many other things could have come up… We are not allowing the river to be concretised. When you have such a huge population you also have to look at these things (allowing the construction of metro pillars, bridges etc.). You can't look at the project just for the Yamuna. We have to see the trade-offs… They will become very very beautiful areas which can be used by local (upper-middle-class) communities."*

*Q: Why is such compensation not allowed for the farmers?*

*Technical expert: "They have been the culprits themselves. They are also polluting the river."*

The above statement shows two things, one, the rejuvenation and restoration aspects of the bio-diversity parks do extend to accommodate social aspects such as public transport, recreation, and aesthetics for 'the greater good'. Thus, there is a space for negotiation, coexistence, and multiplicity. The trade-off of stopping the entire concretisation of the floodplains but allowing the construction of ecologically degrading pillars and bridges is seen as justified. However, this consideration is not extended to the farmers even though their pollution footprint is comparatively smaller. Here it is their eviction that is seen as justified for 'beautifying' the area. As discussed in Chapter 1, the implementation of the rejuvenated

Yamuna initiative is enhancing marginalisation and dispossession. Environmentalist (6) also conveys the irregularity within trade-offs,

> *"Environmentalists can't just look at saving the environment but also the human aspect of it. I was totally against the evictions that took place on the banks of the Yamuna. You remove those jhuggia and then build a 5-star hotel. Their pollution footprint was very small."*

Here while the technical expert accuses the farmers of being polluters, it is important to note that the latest Central Pollution Control Board (CPCB) report (2019) observed no exceedance in vegetable and fodder samples in the Yamuna floodplains for metals and pesticides. While soil contamination was found to be due to excessive use of fertilizers, the report encouraged organic farming and growing select crops which have a low intake of heavy metals. Moreover, the water contamination found was "*primarily due to industrial wastewater discharge*" (CPCB 2019, p.1).

However, the CPCB (2019) report has faced some backlash and dismissal from environmental experts. Environmentalist (3) stated,

> *"I should also say that some groups are saying that the cultivation in the floodplains is not harmful. That's not true. It is clear that whether they use groundwater or they use Yamuna water, which is not really water it is sewage, there have been many cases where the vegetables are contaminated. Other groups saying that it is not contaminated are completely uncredible. There are vote bank politics. Also, advocacy groups are pushing for this. But it is very clear science that vegetables are polluted. The soil and water are heavily polluted with heavy metals. So, if you see it from a public health perspective, there is a health danger from vegetables coming out of the floodplains… What I'm saying is that development and ecological betterment can take place side by side by not converting land use (in the various Master Plans). The present land use must continue, and farmers can stay there. There is no need to build anything on the floodplains."*

Another environmentalist commented on the same issue stating that,

> *"There have been several studies. Vegetables that grow underground have been found to be contaminated largely with lead. One CPCB Report (2019) is saying that the vegetables are not polluted. It cannot be said to be conclusive. A lot of factors affect this. What season has the test been conducted? Which place? There are many variables. This is a matter of being researched over a few years. Different vegetables, different seasons, different distances from the river. One report should not decide such things, whatever the result of the report. But let's take a rule of thumb, let's bring a vegetable from somewhere else. And bring a*

*vegetable from the Delhi floodplains. You will see the difference. The Delhi vegetable will go bad within a day. The other will be fine for 2-3 days. It Is very easy to determine if the vegetables grown here are consumable or not. The main thing here is heavy metals. The effect of heavy metals on your health is long-term. It will be very difficult for anyone to establish if people got sick eating those vegetables. You grow old, there are difficulties, and you think that it is because of old age. For all you know, it's because of the vegetables… We have always been for the farmers… The river floodplains can only be used for 2 things, the river and the seasonal farmers. Farmers have been there for a long time."*

It is important to note here that while being critical of the current farming practices, these statements recognize that the large-scale environmental degradation is not caused by the farmers and that they should not be the ones paying the price for it.

Expanding on the disproportionate action against farmers, environmentalist (6) stated,

*The 2019 observations by NGT by Shailaja Chandra,[52] the NGT panel that banned farming on the banks of the Yamuna. All that looks at farming. All the vegetables that are grown there are toxic. So, you blame the farmers, and you ban farming. But you do not go to the source of the toxicity. The polluting industries empty their effluents in the river. That is a bigger question that needs to be addressed.*

Here the environmentalist raises the question of whether the toxicity in the vegetables is because of the farmers using chemicals or the industry effluents being picked up by the vegetables. The intention here is not to excuse the growth of toxic vegetables. Nor is it to villainise yet another actor, the industries which again unjustly impact the daily wage workers the most as described in chapter 4. The intention here is to point out the multiple physical aspects at play and the socio-economic burden being born by few creating inequities.

However, the ontological difference marked by environmentalist (6) in understanding pollution is important to notice. When fertilizers are labelled as a problem then the solution becomes banning fertilizers. When agriculture is labelled as a problem, then the solution mirroring bourgeois values, attitudes and experiences becomes banning farmers and

[52] Ms. Shailaja Chandra was the member of the Yamuna Monitoring Committee and former Chief Secretary Delhi.

farming. This solution reveals what the state and the judiciary deem problematic. In the state and judiciary documents, the farmers themselves are termed as the problem. As discussed in Chapter 5, farmers are institutionalised to be dangerous, polluting, and disorderly. This is followed by ideas of order, sanitation, legality, aesthetics, hygiene, safety, conservation, health, and proper civil conduct leading to exclusionary large-scale spatial changes. These measures show that these environmental actions are not solving the problem of pollution but rather producing the problem of polluters.

This ontological differentiation opens room for a multiplicity of solutions. Environmentalist (3) describes one such solution which dictates farming as a method to detoxify floodplains,

> *"There are kinds of farming that can slowly detoxify the soil. These are nature-based solutions. They know how to detoxify without going through an industrial process. It is possible. If we can get the people who live and farm on the Yamuna plains. For that, there is a need for institutional support. Their livelihood and toxicity of the Yamuna can be slowly taken care of."*

Moreover, this can replace fertilizer inputs (Steglich et al. 2022; Maes and Jacobs 2015). Again, these solutions need to be assessed through the political ecology framework as technology does not become the golden solution it is envisioned to be. The point is that the farmers are being evicted from the floodplains to create biodiversity parks. This is because ontologically, farmers and pollution are both tagged as the problem. When they are separated, the possibility of equitable solutions emerges.

This chapter by exploring the multiplicity of both the problems as well as the solutions shifts the criminalised identity of the farmers to recognising them as environmentalists. This makes space for multiple non-exploitative lifestyles, occupations, and relationships to the environment (Williams and Mawdsley 2006). The demand for such a reality is next explored. The importance of this recognition is highlighted in the next Chapter analysing competing, complex and tense environmentalisms of the farmers in Chilla *Khadar*.

### 6.3.1 Environmental imaginaries of the waterscape

As discussed in Chapter 4, there are two dominant imaginaries of a beautified environment working in Delhi currently. One is parks such as Jubilee Park criticised by mainstream

environmentalists and farmers to be socio-ecological degrading (Follmann 2016, 2014). Two are conserved untouched natural spaces such as the bio-diversity parks. These imaginaries attempt to apply models of conservation often imported from the West (Gottlieb 2009). However, here a third imaginary will be explored, the mix of parks, conserved natural spaces and farms by the farmers. However, it is not being claimed that all farmers have the same environmental imaginary. Social forces are incorporated and reproduced through desires (Fanon 1967). The perceptions and valuations by farmers of nature somewhat differ and are somewhat common to the upper-middle-class. These reasons are rooted in the formation of material, social, cultural, and institutional conditions, and contexts within which the socio-ecological process takes place (Álvarez and Coolsaet 2020). Therefore, all claims made by the dispossessed are not free from the risk of injustice and environmentalism needs to be understood within these factors. Chapter 5 discusses how the land-claiming farmers, the tenant farmers and the fisherfolk all are facing various challenges and have various demands. However, following the above epistemological and ontological discussion, there is a possibility of transdisciplinary knowledge leading to new environmental imaginaries.

As discussed in Chapter 2, both bourgeois and dispossessed environmentalisms encompass a broad range of thoughts. These ideas and values intersect and interact. Broadly, bourgeoisie environmentalism focusing on class is driven by aesthetics and environmentalism of the dispossessed by livelihood. Does this mean that the dispossessed do not care about aesthetics? Or that the upper-middle-class are completely blind to the livelihood woes of the poor? In Chilla *Khadar* it is seen that there is diversification in all environmentalisms and the lines are blurred. There is a need to critically analyse these claims and expand the scope of what is seen as environmentalism and environmental resistance.

The desire of the marginalised is also captured by the world-class city's environmental imaginary. Farmers are not frozen in time and reinterpret ideas of modernity and development (Ghertner 2011). This complexity is captured by my interaction with land-claiming farmer (3) when we started discussing the Yamuna Biodiversity parks.

> *"हाँ! मैं गया हूँ उधर। इतना सुंदर है। तालाब का पानी भी इतना नीला और साफ है। वो लोग रोज़ घास काटते हैं। इतनी हरी-भरी है, छोटी छोटी। DDA ने अच्छा संभाला है।*

*(Yes! I have been there! It is so nice. The water in the pond is so blue and clean. They must cut the glass there every day. It is so green and short. DDA has done a good job)."*

This clearly shows that the farmers are not against biodiversity parks. As stated in Chapter 5, some even prefer the bio-diversity park over farms.

On the other hand, as discussed in Chapter 4, mainstream environmentalists are open to including the farmers and have done so, thinning the class-based distinction within bourgeois environmentalism. Moreover, the growth of urban populations worldwide is leading to an increase in urban farming going against the world-class imaginary (Diehl et al. 2019). However, the idea of urban farming is being appropriated through bourgeois environmentalism. Describing this shift upper-middle-class *Dilliwali* (4) stated,

*"Kitchen gardens are big fancy things which are in so much demand now. As we cannot absolutely avoid outside products, we can definitely reduce consumption to start with. To become self-independent a lot of people are considering organic forming. A lot of IITians (Indian Institute of Technology), a lot of engineers have left the job to do so."*

Organic and urban farming here is considered to be successfully done by moving away completely from 'dependency' on traditional farmers. This again leads to similar situations where while situated knowledge is being promoted, the knowledge holders are still being evicted[53]. Nonetheless, the multiplicity of terms such as development, progress, and beautification are being reconsidered opening diverse possibilities.

Thus, while clouded in complexities and tensions, the clear dichotomy of the environmentalisms of the bourgeois and the dispossessed is thinning. Therefore, as discussed in Chapter 2, both the idealistic village imaginary and the world-class city are utopic. Thus, the problem here is not farmers being against urbanisation, progress, or development. The problem is that of them being carved out of this environmental imaginary.

[53] Here again, like bio-diversity parks, while organic farming is environmentally sound, analysing its apolitical implementation through the political ecology lens identifies unjust socio-ecological outcomes.

### 6.3.2 Farmers as part of solutions

Throughout the thesis, it is seen that farming practices have had vast changes and shown tremendous ability to adapt and continue to do so. The above section discussed how historically aspects of restoration and rejuvenation have already been present in urban areas. This willingness to adapt the farming practices per the requirements of rejuvenating the floodplains is seen in a letter dated 13.09.2008 to the then Chief Minister Sheila Dixit, by the Delhi Peasants Co-operative Society stating that "*the members of the Society may be recognised as lawful cultivators of this land… cultivating this land and maintaining maximum greenry which is the best use of the river and land. We may be given full Govt. financial hep and direction in [any way] deemed necessary. The land use which is greenery only … may be maintained in future planning...*"

Land-claiming farmer (4) echoes this,

> *"सरकार को हमें साथ लेकर चलना चाहिए। खेती में कुछ भी ग़लत नहीं है।*
> *(Government should take us along. There is nothing evil in farming)."*

Moreover, tenant farmer (6) weaves this discussion within not just the rights of the farmers but also the needs of the city,

> *"ऐसे कैसे हमें हटा सकते हैं? हम इतने सालों से यहाँ काम कर रहे हैं। हमारे पास Aadhaar Card, Ration Card सब है। हमारा कोई हक कैसे नहीं बनता? पहले हम कुछ दूरी पर रहते थे, वहां अब Akshardham है। पहले हमें वहाँ से हटाया। अब हम यहाँ हैं तो यहाँ भी हमें धमकाते रहते हैं... हम कितनी सारी सब्ज़ियाँ देते हैं colony वालों को। हम फूल उगाने लगेंगे तो लोग खायेंगे क्या? ये समझते नहीं हैं। अगर हम चले गए तो इन्हें सब्ज़ियाँ महँगी मिलेंगी। अभी 5-5 रुपये के लिये लड़ते हैं हमसे।*
>
> *(How can they remove us? We have been working here for so many years. We have Aadhar Card and Ration Card. Do we not have any rights? First, we used to live a bit further away, where there is Akshardham Temple now. First, they moved us from there. Now we came here, and they keep threatening us here too… We sell so many vegetables to people in the colonies (gated societies). If we all grow flowers, then what will they eat? They do not understand. If we are made to go then they will get vegetables at a higher price too. Now they keep on bargaining for ₹5 (£0.05))."*

This need was felt the most during COVID-19 when transportation from various states was stopped and food production within Delhi played an important role in fulfilling food security demands. However, this was not felt by everyone. Yamuna *Rakshak* (guard) (1) stated,

> *"सब्ज़ी तो बाहर से ही आती है दिल्ली में। इन लोगों को हटा दिया तो हमारी सब्ज़ी आना बंद तो नहीं होगा। कितनी ही सब्ज़ी पैदा कर लेते हैं ये लोग?*
>
> *(Vegetables anyway come from outside Delhi. If the farms are removed Delhi will not face a shortage of food. These farms produce a fraction of the vegetables consumed in Delhi)."*

Nonetheless, this echoes Bhan (2016, p.221) where the farmers shift the conversation from farming on the floodplains being allowed as a need of the helpless to being a right of citizens. While these 'unskilled migrants' forming a new proletariat usually get regarded as economically, socially, and politically destabilising by actors such as the state, the judiciary, and the upper-middle-class *Dilliwale*, they end up forming the backbone of the city's economy.

Here their demand is not ownership of the land but a declaration of the legal status of farming by the current farmers. Moreover, the farmers are not asking to be the custodians and protectors of nature. They are actively asking to work with the state under its guidance to maintain the land use and greenery. This signifies a radical contestation challenging the currently dominant environmentalism. Here, as opposed to a problem of pollution or housing, the problem is recognised as a crisis of coexistence of shared spaces. As discussed above, this shifts the discourse from technical solutions to systemic causes of the crisis.

The possibility of these demands is recognised by the Expert Committee (2015) which states that "*Wherever the floodplain land is privately owned by farmers, the farmers should be persuaded and convinced to change the nature of their activities in the interest of the river and their own. It will be appropriate not to acquire the land from them but train them into alternate land use such as fish nurseries/fishing, and use of natural grass/vegetation for cattle. If the farmers are assured of maintaining their incomes and ownership of the resource in a different use regime, the floodplains can be restored in a win-win situation.*"

Environmentalist (1) too acknowledges this possibility of a hybrid between recreation and cultivation,

> *"What DDA is doing right now is ornamental. They can experiment with farmers maintaining the biodiversity of Yamuna."*

Such coexistence can take various shapes. Within these discussions, recreation, ecology, and agriculture all find a place within the bio-diversity parks inclusively. Figure 25 visually depicts this.

Source: Social Design Collaborative with Kushal Lachhwani in consultation with farmer groups

Figure 25, Illustration of recreation, ecology, and agriculture all inclusively finding a place within the bio-diversity parks.

It is important to state here that policies being implemented through the ontological separation of farmers and pollution in Delhi are not hypothetical scenarios. The Economic Survey of Delhi (2021) reports training 390 farmers and technical staff in 15 sessions. It also

reports that 775 farmers held 62 demonstration camps. It further adds that 100 *kissan gosthies* (farmer meetings) were arranged in which 2,800 farmers participated. In the *gosthis* demonstrations of flowers and vegetable cultivation, vermicomposting, organic farming etc were held. One of the regions where this was held was Chilla *Khadar*. Here it is important to note that this step recognises that both farmers and governmental staff require participatory training and see the farmers as agents of change. This answers a call to put farmers first and have a closer interaction between farmers and scientists (Coolsaet 2016). This shows that farmers are not only willing to adapt their agricultural practices but are already doing so. This demonstrates that by politicizing the rejuvenated Yamuna initiative and working out the power dynamics within it through the political ecology framework, while all tensions will not be eliminated, they still can be negotiated.

## 6.4 Conclusion

This chapter answers the second research question: *What is the nature of the environmentalism of the farmers and how does this relate to the environmentalism practised in the rejuvenated Yamuna initiative?* This extends the conversation from the previous chapter which establishes that the farmers are situated within the floodplains in complex social, political, and ecological ways. Here, the relationship between the environmentalism of the bourgeois and the farmers is explored through the political ecology framework. This reveals the multiplicity of the problems and the solutions, and the possibility of the farmers being situated within such a waterscape.

The empirical contribution of the chapter looking at the interaction of various knowledges is vital in understanding whose knowledge is recognised, considered worthy, circulated, transformed, and transmitted as a political matter of everyday negotiations and discussions (Gururani 2002). This chapter not only analyses whose knowledge is being valued but also who is being valued. It is seen that while situated knowledge is being incorporated in bio-diversity parks, the farmers themselves are not. This separates them with their knowledge justifying evictions.

Including the knowledge of the farmers within plans makes solutions more resistant by being fine-tuned to local conditions and socio-spatial realities. In the chapter, I empirically contribute by categorising the aims of the bio-diversity park as improving water quality,

floodplains, vegetation, and recreation based on data from official documents especially the Expert Committee Report (2014) along with ethnographic interactions with the farmers and field observations. One, the river is technically considered as polluted (YMC 2020, p.26). However, tenant farmers understand the river as not inherently polluted but becoming polluted. This opens the possibility of the river becoming rejuvenated. Two, in terms of floods, the rejuvenating qualities of silt are understood. The natural cycles of the river swelling are made space for, erasing the conceptual difference between the river and the floodplains. This strips of the negative connotation of river flooding. Three, the farmers keep the area green and have situated knowledge of the physical aspects of the river and the floodplains. This is vital as the state-led trial and error plantations, projects such as plant nurseries and afforestation drives do not have a successful track record due to limited knowledge of the physical conditions. Four, the state sees the riverfront as a hub of disease and flood risk areas. However, farmers swear by the rejuvenating capacity of fresh air and open spaces. Moreover, the farmers are already expanding their knowledges and skills. These ontological and epistemic tensions are important to note as this knowledge is currently being erased due to evictions. This reveals that while framed to be dominant, the institutional understanding of nature is not the only perspective to be considered, opening the conversation to multiplicity.

Given this, the demand of the farmers as seen clearly by the above-mentioned letter is not that they should exclusively manage the resources on their own at a small scale. These are in line with the bio-diversity parks as stated by the Expert Committee (2014). Thus, as stated in Chapter 4, it can be claimed that the farmers are evicted not for ecological goals but for centralising the resources.

After analysing the politics of knowledge through the political ecology framework, the chapter further theoretically contributes to the environmental governance literature by breaking the binaries between the environmentalism of the dispossessed and the bourgeois. The binaries of the former demanding to go back to the ‘traditional’ and the latter demanding a ‘world-class’ environmental aesthetic is problematised. While the environmental imaginary of the farmers includes farms, it also includes the aesthetic lawned grass and sparkling ponds. Here the farmers do not want to be frozen in time and want to be a part of the transformed waterscape. However, the dismissal of even the idea of the

coexistence of farms and parks, world-class and traditional, development and ecology will be discussed in the next Chapter.

# Chapter 7 Competing environmentalism in Chilla *Khadar*

## 7.1 Introduction

This chapter answers the final research question: *How do the dispossessed negotiate, navigate, and compete under the rejuvenated Yamuna initiative?* While the above chapter analyses the interaction between the environmentalism of the bourgeois and the dispossessed, this chapter narrows the focus to how the environmentalism of the dispossessed in urban Delhi competes with the former to carve a space for itself within the producing waterscape. The political ecology analyses empirically contribute to the wider literature by analysing how they make claims by navigating and negotiating using tools both usually associated with the bourgeois such as filling court cases and engaging with the media along with tools usually associated with environmentalism of the dispossessed such as re-politicizing the debate, engaging with the state and everyday rearranging of space informally. This situated analysis also extends the theoretical understanding of the environmentalism of the bourgeois and dispossessed theories by breaking the binaries between how they both are practised through a combination of formal and informal tools.

To answer this question, I draw on ethnographic data from interactions with farmers in Chilla *Khadar*, DDA employees, judicial experts, housing rights lawyers, and housing rights activists. This situated data is connected to the national-level conversation with data collected from semi-structured interviews with environmentalists. River Yamuna has also been explicitly analysed as an actor through data from field observation, and interviews with farmers and mainstream environmentalists.

To protect the floodplains, the farmers often present the first line of resistance. They open the homogenous techno-scientific environmental discourse focusing on isolated nature, as discussed earlier, to make the conversation more equitable by bringing in discussions about livelihood, identity, and rights. In other words, they open the debate from being siloed and politicize it.

While livelihood concerns are legitimate in their own right, in this chapter I emphasise how the farmers politicise the environmental debate. This environmental engagement of the farmers is vital to highlight as this is the only acknowledged currency within the official environmental discourse currently (Vasan 2021). As it is an environmental plan that is

dispossessing the farmers, livelihood corners independently fall short of creating an impact. Moreover, such an integrated approach against the destruction of sustainable livelihoods and the environment enables an expansion and collaboration of both human and environmental rights. Therefore, the focus shifts away from independently dealing with either livelihood or environmental issues. Rather, this chapter argues for the need to open spaces where multiple, complex, and integrated issues are dealt with more comprehensively.

However, there is a need to acknowledge that such complex space is not uniform and is built by various uneven elements. Chapter 5 analyses how resistance to the evictions by the land-claiming farmers is to maintain their dominance on the resources. Thus, they fail to solve the structural socio-ecological problems. Katz (2004) states that some forms of resistance might even end up supporting the general trajectory of development that necessitated these acts in the first place. Therefore, this integration of livelihood concerns with environmental issues is full of contestations and clashes of interests. The political ecology framework enables an analysis of these contestations by uncovering complex power networks.

As there is no specific policy to protect farmers in Delhi, other policies and judgements are left to be used as tools for resistance. These are situated in the housing rights ecosystem. Therefore, most of the official channels currently isolate these issues and deny the farmers a chance to perform their environmentalism. Nonetheless, many forms of active, even if individual, resistance shape the day-to-day struggles (Swyngedouw 2004, p.151). These actions might be limited to occupying space (resisting concretised development), being present on the floodplains (surveillance), farming (keeping alive various knowledges), and being vocal (re-politicising rejuvenated Yamuna initiative).

This chapter first emphasises how the farmers re-politicise the environmental debate bringing in concerns of justice and expanding the discussion to be more holistic. The terms of resistance the farmers are constrained to use are explained. This is vital in both their identity projection and formation. How this identity formation dictates their collaborations and legal routes is then discussed. The next section uses the discussions and elaborates on the way farmers navigate between the various restrictions to actively make their mark on the environmental discussions in Delhi.

## 7.2 Re-politicising the debate

This chapter emphasises the importance of extending the scope of the rejuvenated Yamuna initiative to encompass human rights. This demand is the root of resistance by the farmers and is elaborated on below.

One of the prime ways that the farmers resist inequitable plans is by problematising the issue and making it political. Tenant farmer (7) asked,

> *"अगर हम हटा दिए जाएँ तो क्या यमुना साफ़ हो जाएगी?*
> *(If we are removed will the Yamuna be rejuvenated?)"*

By asking the simple question, tenant farmer (7) opens the seemingly black box of labelling farmers as not only polluters but one of the biggest polluters, reflected by the scale of the campaign against them.

This re-politicisation of the discourse debunks the claim that the rejuvenated waterscape will be an equitable public good for all. It reveals the historical aspects that created this polluted waterscape and opens the present and future to revolutionary possibilities (Katz 2004, p.258). This socio-ecological analysis might be a step to bring about 'just sustainabilities' by firmly tying ecological and social inequalities (Anguelovski et al. 2019; Agyeman 2013).

Once this black box opens, other aspects are revealed. When asked the question of why the river is polluted? Tenant farmer (TF) (9) stated,

> *TF (9): "गन्दगी नालों से आती है। उस पर रोक नहीं लगेगी।*
> *(Pollution is due to the drains. That will not be controlled)."*
> *Q: So, who is responsible for most of the pollution?*
> *TF (9): "Maruti वाले लोग प्रदूषण का कारण बनते हैं। अब इस इलाके को देखिए, lockdown के दौरान बाहर से लोग नहीं आए। तब यह सब साफ़ था। कोई भी अपनी कारों से सामान नहीं फेंक रहा था।*
> *(Maruti wale log' (people driving Maruti cars) cause the pollution. Now look at this area, during the lockdown people from outside (upper-middle-class) did not come. Then it (the floodplains) was all clean. Nobody was throwing stuff from their cars)."*
> *Q: Then why were the farms being targeted instead?*

*TF (9): "एक चूहा गोदाम से गेहूँ के दाने सुरंग खोदकर निकाल लेता है और भाग जाता है। किसान अपनी कड़ी मेहनत और अनाज बचाने की चाहत से सुरंग ढूंढते हैं और उसका पीछा करके अनाज निकाल लेते हैं। यह सब भूमिगत है और देखा नहीं जा सकता। सरकार को भी इसी तरह focus करने की ज़रूरत है।*

*(A mouse takes wheat grains from the storage by digging a tunnel and running away. The farmers with their hard work and the need to save the grains find the tunnel and follow it and retrieve the grains. It is all underground and can't be seen. The same focus is required by the government)."*

*Q: So, why doesn't the government do it?*

*TF (9): "उन्हें इसकी ज़रूरत नहीं है... वे Yamuna पर ख़र्च किया गया सारा पैसा 'खा' जाते हैं।*

*(They do not need to… They 'eat' all the money spent on the Yamuna)*[54]*."*

Here the tenant farmer identifies one, the technical cause of the pollution (untapped drains) and two, the larger institutional and socio-cultural cause of the pollution. As discussed in Chapter 1, the drains carrying the sewage are correctly identified as the main technical source of pollutants entering the river. Here the farmer is also talking about corruption playing a role in the failure of the rejuvenated Yamuna initiatives (see, Valipour and Singh 2016) and the larger institutional failure. The politicians (in extension the state) do not have any stake in the river being pollution-free. Hence, instead, their focus is identified as satisfying their monetary needs and resource capture as stated in Chapter 4. Corruption has been described as 'India's greatest failure' (Bagra 2015, p.92) and 'pollution' (Nagarwal and Kumar 2016, p.77) due to the highest governmental officials practising bribe-taking.

In the above statement, the tenant farmer also re-identifies the actors responsible for the most physical pollution as the 'Maruti *वाले*' (people driving Maruti cars). The Maruti cars started being produced in 1983 under a joint venture between the government of India and Japan-based Suzuki Motor Corporation. While now, the Maruti car has lost its dominance, it once held a symbolic position of modernity and consumption being made available to the middle classes (Rao 2000). The car with its name Maruti, based on the Hindu God Hanuman, was made through global technological advancement, and became a symbol of the upper-middle-class Indians participating in the neo-liberal spectacle of world-class cities (Hansen

[54] *पैसा 'खा' गए* (eating money) is a common expression used to refer to monetary corruption.

1999, Jain 2016)[55]. In terms of infrastructure, the introduction of these fast cars was the beginning of the mass construction of highways, flyovers, and bridges that cut the Yamuna River throughout Delhi, hampering free flow (Jain 2016, p.330). They become one of the prominent reasons why the river loses its rejuvenating capacity. Environmentalist (2) explains the importance of river flows,

> *"नदी एक ecosystem है, और survival के लिए पहली चीज़ इसका flow है। लेकिन flow पर कोई ध्यान नहीं है... यह नदी की lifeline है। तो फिर सारे effort fail हो जायेंगे। दिल्ली और बाक़ी जगहों पर भी यही हो रहा है।*
>
> *(The river is an ecosystem, and the primary requirement for survival is its flow. If there is no focus on the flow… it is the very lifeline of a river system. Then all efforts are going to fail. This is what is happening in Delhi and elsewhere as well)."*

Therefore, the tenant farmer (9) not only identifies the polluters as upper-middle-class but also links the pollution to the wider concepts discussed in the previous chapters such as the aspiration of being a world-class city, consumerism, neo-liberalisation, and modernity. While this direct connection of the pollution in the drains and the upper-middle-class is not made in the various policies and judgements under the rejuvenated Yamuna initiative, the farmer by identifying this simple connection brings light to the mismatch of the tag of polluters forced upon the farmers. However, how this politicisation of the discourse shapes resistance is factored by many factors such as identity, alliance and structural alienation which are discussed next.

## 7.3 Terms of resistance

As discussed in Chapter 4, Vasan (2021) studies environmentalism as a cultural element (re)produced within the NGT becoming a component of the social world in which individuals make sense of their own place. Thus, the institutionalised space of the NGT represents one moment of mainstreaming, patterning, stabilizing, and objectifying environmental consciousness. So, environmentalism becomes a legitimate currency created by the NGT which becomes the only available narrative to enter the space let alone negotiate. Thus,

[55] While claiming to be modern, the middle class maintains historic discrimination patterns (Joshi 2001). Thus, world-class modernity and traditional hierarchy go hand in hand.

even if their actions don't stem from environmental concerns, for any actor to gain entry into the field, they need to represent themselves as environmentalists.

However, the farmers of Chilla *Khadar* are completely denied an environmental identity and participation in environmental discourse through official channels. As the judiciary and the state can be recognised as the primary decision-makers in Delhi, denial by them and its navigation by the farmers are looked at next. Housing rights lawyer (4) explained,

> *"In courts, the judge is supposed to hear both sides and then pass orders. In these matters, there is no representation of jhuggi dwellers. When the perspective is brought before the court, the jhuggi dwellers are seen as encroachers on government land. So, they are seen as illegal… In the Yamuna matter when we went to the NGT to stop evictions they told us that they do not have the authority to do it. They told us to go to the High Court. When we went to the High Court, they said that the matter was pending before the NGT, so they refused to intervene."*

Echoing this, Housing rights activist (2) stated,

> *"When you go to NGT for a housing case they will say that we do not get into housing we get into the environment. When you go to the Supreme Court, they will say that is an environmental issue you go to NGT. They are playing passing the basket."*

Thus, the currency of environmentalism is not made available to the farmers. As has been discussed throughout the thesis, the dominant apolitical techno-scientific environmental discourse hides and erases inequalities and violence. However, there are counterclaims to this order. The dispossessed do not stay silent and instead struggle for alternatives to one, accommodate them in this very system and two, change the system. This struggle of the dispossessed and flagging infringement of rights depends on specific politics, culture and identity and thus is not uniform (Banerjee-Guha 2011, p.94). Nonetheless, farmers daily negotiate with, engage with, resist, and oppose this dominant environmental discourse. Their claims are based on rights, needs, identity, and a place in the city. The farmers reclaim space by actively engaging with the rejuvenated Yamuna initiative. These social relations are studied below.

### 7.3.1 Identity- Polluters/environmentalists

The law can both empower and disempower various situated groups. As discussed above, recognition is important to achieve justice. The informality and irregulation practised through the rejuvenated Yamuna initiative within planning and judgements have been recognised throughout the thesis. As discussed in Chapter 4, both the mainstream environmentalists and the farmers fight against the state's efforts to build large, concretised structures that inherently damage the floodplains. However, farmers are just seen as polluters and not as stakeholders to be present at the table. The identity of the farmers first is boxed as migrants as discussed in Chapter 5 and then as "petty waste pickers" (YMC 2020, p.19). Here the farmers are being dispossessed, till the "guardian angel" (Negi 2011, p.183) takes the reins and rejuvenates the river and till the farmers mould themselves in the approved eco-friendly trope of appropriated organic farming. Thus, the focus has shifted from managing pollution to villainizing the most vulnerable. This criminalisation pulls them away from being citizens with rights and active environmentalists. In other words, they are seen as perpetrators (problems) instead of the valuable "citizens as actors" (solutions) that *Namami Gange* and NIUA (2021, p.39) advocate for. However, considering them as 'solutions' will not only bring them to the table and lead to more equitable outcomes but also lead the way to recognise multiple lifestyles to reconnect nature and culture.

This non-recognition of the farmers to perform their environmentality not only weakens the possibility of a united and stronger front of resistance between them and the mainstream environmentalists but also changes the resistance strategies. Engaging with the judiciary is a reactionary medium and dictates which strategies are made available. Human rights lawyer (3) explained how the court actively rejects the environmental identity of farmers.

> *"It is about fundamental rights, you must know there is the Right to life under Article 21. But the NGT rejected our application by saying that they are concerned with the environmental victims only. So, if there is a flood then yes, it is a case of environmental victim. But if my house is demolished (due to the rejuvenated Yamuna initiative) then no."*

Article 21 of the Indian Constitution guarantees the 'right to life', including the right to a clean environment. The current evictions on the floodplains are taking place under this Article. In the above statement, the housing rights lawyer explains how the farmers are not

included in the environmental debate as even environmental victims, let alone active environmentalists. Thus, the rights of these communities are being redefined by being excluded from the discussion altogether. While the case of the pollution in the Yamuna is considered an environmental issue, the case of the farmers losing their livelihood and residence because of the pollution in the river Yamuna and the rejuvenation effort is not. The farmers are not allowed to claim any other role within the framework of the debate apart from the designated criminalised ones. These bar them from claiming an environmental identity to any degree.

### 7.3.2 Alliance: Environmental organisations and farmers

This legal barrier not only structurally projects the farmers and nature against each other but also the farmers and mainstream environmentalists against each other. This shapes resistance.

Both environmentalists and housing rights activists claim to sit on the left and be against unjust capitalistic growth (interviews, NGO reports, newspaper articles, social media handles). Moreover, they are similar in having a limited capacity and face similar obstacles put forth by the government and the judiciary. However, evictions become a token symbol for environmental acts. This leads to feelings of anger and abandonment of the farmers not only towards the court or the DDA but also to the mainstream environmentalists. Therefore, instead of the gap being bridged between the mainstream environmentalists and the farmers, this gap widens. Echoing this, land-claiming farmer (5) expressed his anger towards the breaking of his long association with Mr Manoj Misra, a leading environmentalist working on the issue of the river for more than a decade. He stated,

> *"जब खेल गांव बनाया जा रहा था तब हम विरोध कर रहे थे। Manoj Misra, Master-ji के साथ आया था। वह हमारे साथ बैठा। उसने हमारे साथ खाया, हमारे साथ पिया। उसके बाद उसका नाम हुआ। फिर बाद में हमें पता चलता है की उसिकी वजेह से हमें सरकार हटा रही है। उसने हमारे साथ बहुत बड़ा धोखा किया है।"*
>
> *"(We were protesting when the Commonwealth Games village was being built. Mr Manoj Misra came along with Masterji (one of the leaders of the land-claiming farmers in 2008). He sat down with us (to participate in the sit-in protest. In extension, this denotes a sense of bonding). He ate with us, drank with us. He got famous after that (protest). Then later we found that he was the cause of the government evicting us. He has betrayed us.)"*

This anger towards the environmentalists was reflected in many conversations throughout my fieldwork. Tenant farmer (10) sharply stated referring to Mr Manoj Misra,

> *"वो अब यह नहीं आ सकता।*
> *He is not welcome here anymore."*

This complete removal of farmers from the environmental conversation as agents is not only an injustice but also crumbles the potential for a collaborative effort toward rejuvenating the river. As discussed in Chapter 2, the pattern in Delhi as in many other places such as the US (Anguelovski et al. 2019) is of environmentalists and housing rights working in opposition to each other. However, as stated in Chapter 4, united protests of the farmers and the mainstream environmentalists were seen against the construction of the Commonwealth Games Village (Colopy 2012, p.54) and the Golden Jubilee Park (Follmann 2016, p.12). An alliance of local environmental NGOs with leading environmentalists such as Mr Manoj Mishra mentioned above along with Mr Rajendra Singh also known as the 'Waterman of India' and with the Peasants Co-operative Multipurpose Society Ltd (Follmann 2016, 2015), and various artists and journalists was formed. Protests were held using Gandhian-style धारणा प्रदर्शन (sit-ins), writing letters and filling petitions (Colopy 2012) displaying a positive pattern of exception in Delhi breaking free from the bourgeois environmentalism followed before (Follmann 2016). Again, as stated in Chapter 4, this collaboration is not being romanticized and it was ripe with tensions and contradictions. According to Follmann (2015), the farmers' participation in the protest was limited due to conflicting land ownership patterns as discussed in Chapter 5. Nonetheless, the point is that in Delhi, there has been a pattern of collaboration and active communication between mainstream environmentalists and farmers in the past decade. Even if this alliance failed in stopping the construction of the Commonwealth Games Village itself, it did stop the development of the floodplains with widescale concretised construction, as discussed in Chapter 4. Environmentalist (5) recalled this pattern of collaboration as an exception in Delhi,

> *"However, in the Delhi Yamuna case... There is this whole history to mobilise communities along the Yamuna and then you come to the legal action."*

The value of this collaboration can be emphasised by comparison to the Sabarmati Riverfront discussed in Chapter 4, which caused large-scale social and ecological damage to the river and its floodplains. Among others, the lack of collaborative resistance between housing rights issues of evictions and environmental issues of environmental degradation was recognised as one of the most prominent reasons for its successful construction. Pessina (2018) states how the weak resistance due to non-collaboration almost portrayed no conflict at all.

### 7.3.3 Structural alienation of farmers from environmental issues

Apart from the rigid judicial structures creating a wedge between the farmers and the mainstream environmentalists and not acknowledging the environmental identity of the farmers, the current rejuvenating Yamuna effort inherently alienates the farmers from raising environmental issues. This is because the environmental narrative is used to implement the spatial injustices faced by the farmers. Therefore, while resisting, they have to be careful to not be potentially caught in a position where planners use their own environmental grievances to justify even greater forceful 'greening' interventions.

The framework of oppression sets the parameters of the resistance. Thus, the farmers exercise power within the institutional arena by strategically building a narrative around the issue. One of the reasons that farmers are left with no other option but to resist by emphasising their need for residence and not livelihood or environment is because of the policies and laws available. Housing rights lawyer (1) explains,

> *"I cannot say that I am farming because Delhi doesn't have any agriculture policy to protect its farmers. They can say that they are living in shanties for whatever years. And if an eviction takes place there has to be rehabilitation. After the Ajay Makan judgement, we thought that yes now the court has started to understand the problems of the slum dwellers. Ajay Makan's case stated that a poor should not be punished for his lack of knowledge of the ownership. The poor person does not know whose land it is. Is it his fault? He saw an empty land and started living there. In 2015 after AAP (Aam Admi Party) came there was a policy for slum dwellers. Before that, in 2010 there was a Sudama Singh judgement by Justice Muralidhar. It said that you can't demolish shanties just like that as it is the basic means of living for the poor."*

The above statement mentions a few legal judgements and policies that the farmers, *jhuggi* dwellers, civil society and activists have used to ward off evictions. Ajay Maken v Union of India (2019) going beyond the right to basic shelter affirmed the right to the city as a fundamental right under Article 21. It not only provided *jhuggi* residents constitutional protection from forced evictions but also observed that the residents should be treated as citizens supporting the growth of the city (Idiculla 2020, p.3). This recognises the demands of the farmers of being a valuable part of the solution as discussed in the above chapter. It drew from the historic Sudama Singh v Government of Delhi judgement (2010) which emphatically underlined the citizenship of *jhuggi* residents by asking for a 'meaningful engagement' to housing and the state's legal obligation to fulfil it (HLRN 2020; Sangai 2019; Bhan 2016). These rulings depart from the last two decades of judgements by the Delhi High Court proactively being the main driver of demolitions thus becoming a landmark judgement (Idiculla 2020). Moreover, the *Mukhyamantri Awas Yojana* (Chief Minster Housing Scheme) (2022) under the "*Jahaan Jhuggi Wahin Makaan*" (in-situ slum rehabilitation) policy (2020) focuses on improving housing conditions and granting legal rights to *jhuggi* dwellers. These judgements have been the fruits of continuous negotiation and complex engagement of the income poor.

However, while they engage with the historical factors behind inequalities, these judgements are exceptions rather than the rule and highlight vast inconsistencies (Sangai 2019, p.190). Moreover, they fail to stop evictions (HLRN 2019, p.44), especially under environmental matters such as in the case of Chilla *Khadar*. This is echoed by Housing rights lawyer (4),

> *"AAP had come up with 'Jaha Jhuggi Waha Makan' (in-situ slum rehabilitation)… They started implementing CMAY [(Chief Minister Awas Yojana (Chief Minister housing scheme)]. They did large-scale surveys of jhuggies. However, the way the surveys were done was highly problematic. They said they wanted to calculate the number of jhuggies and people in jhuggies. They have been very unsuccessful."*

This tactic of surveys has historically been used by officials to ensure maximum demolitions. First, a survey is done to ascertain exactly what documents the farmers have. Second, a policy for eviction and relocation is formulated based on the documents held by the least number of farmers. Housing rights lawyer (3) elaborated,

> *"Earlier people didn't even know what a voter card or election card is. This has been started now. And this was used as a tactic (by the DDA). Whenever they do demolition, they always do surveys. They collect data about how many slum dwellers are there. Then they formulate a policy accordingly based on the documents that most slum dwellers do not have. When it comes to the welfare of people, they use very mechanical things. Even if one card is missing, they will demolish."*

Throughout the fieldwork, I observed that the farmers were aware of this tactic and prioritised gathering documents. As stated in Chapter 3, as someone getting an institutional education, I was approached to find out processes to gather documents and ask if I could help with my *जान पहचान* (knowing the right people). While earlier the sole strategy used to be pledging support to a political party to win unofficial immunity from eviction (Bhan 2016), now strategies can be seen to be diversified. However, there is still a major limit to this diversification as all the above-mentioned tools are situated in the housing and livelihood area. Therefore, the language of resistance used by the farmers gets limited to that. Housing rights lawyer (2) elaborates,

> *"The present Chief Justice (of India), it's very hard to make him understand. He doesn't even give time for demolition matters. He thinks it's very petty… Now we have more policies, more judgements more things to show that yes right to housing is a fundamental right. When you look at the law now it's better. It's not about the law actually. The difference is what sort of a person is sitting. Who the judge is? We can say that the law is there to follow it. But it doesn't go like that. It all depends upon the judges at the end of the day… Sometimes judges agree with you but do not pass favourable judgements… The current chief justice is very pro-government. If you come across such a judge, whatever tactics you have, will not work. They find something. Either they will delay it."*

Despite the judgements and the policies, the only identity that the farmers are burdened with stays as that of a petty illegal encroacher. The point is that while the above judgements and policies provide some tools to fight, they fail to provide guaranteed protection. Therefore, farmers reach out to other venues such as the public and political sphere to strengthen their efforts of resistance. This is discussed in the next section.

As stated in Chapter 5, Bhan (2016, p.28) notes that previously, the upper classes were successfully able to claim a right to the city by recognising themselves as 'Citizens of Delhi' and recognising *jhuggi* dwellers as 'illegal encroachers', making citizenship exclusionary. The

above policies and judgements show that the income poor too through their long resistance, are starting to officially be able to claim the city as their own. Moreover, as discussed in Chapter 1, the upper classes are no longer immune from demolitions. Thus, the exclusion to be recognised as having a right to the city does not stay limited to the income poor within environmental matters anymore. The point is that the right to the city idea deals with aspects of justice, democracy, citizenship and defining who gets a right to participate in city building (Soja 2010). However, whether it leads to a more progressive, radical, democratic re-appropriation of cities is not guaranteed (Banerjee-Guha 2011, p.94). Nonetheless, this contestation also enables claims and counterclaims.

Thus, there is a need to place the right to the city within the environmentalism of the dispossessed. Currently, the right to the city is claimed to compete with or is seen as a trade-off with the right to life, pitting the farmers against the river. However, as discussed in the previous chapter, housing rights activist (2) states that there is no conflict between the farmers and the river,

> *"When there is a (produced) conflict between the environment and housing rights, we say that there is no conflict. We have to work together with the housing rights activists and the environmentalists. I work on both. And I do not see any conflict whatsoever. These people will be affected by climate change the most. When you talk about cities, the jhuggi dwellers are going to suffer the bunt. We have to put them in the centre. Otherwise, it doesn't matter… When you look at some of the cases you see some conflict between man and the environment but actually, there is no point here."*

As discussed in Chapter 2, through this ontological nature/culture dichotomy, environmental solutions take the shape of creating unjust enclosed spaces for conservation such as in the case of the bio-diversity parks. How these restrictions shape resistance by the farmers in the judiciary, media and planning is next discussed.

## 7.4 Tools of resistance

Unjust geographies of political power while intensely reinforcing oppression and control can also under the intersection of space, knowledge, and power, potentially be liberating by stimulating resistance (Soja 2010). As opposed to the Yamuna Pushta case (2004) described in Chapter 4, where evictions almost came out of the blue and were extremely unexpected

as nothing like that had happened in living memory, the farmers are better prepared and aware now. As mentioned above, social structures dictate how actors defend themselves and create environments. Resistance is embedded in social, political, and economic power relations (Swyngedouw 2004).

### 7.4.1 Judiciary and mass mobilisation

The conversation between land-claiming farmers (5) and (3) below reiterates the above discussion on boxing the farmers into a singular identity of illegal encroachers and limiting them to the singular platform of the judiciary. It then extends the discussion by looking at how the farmers navigate this conundrum, what are some of the other venues they reach out to and how they strategize their resistance.

> *Land-claiming farmer (LCF) (5) explained how when his father passed away, he took over the farms and found out about the legal entanglement. "अब हम लड़ रहे हैं case। इतने साल हो गए। मामला चले ही जा रहा है।*
>
> *(We are fighting the case. It has been so many years. The case is going on)."*
>
> *At this point, his younger brother land-claiming farmer (3) joined the conversation. I asked if the court was the best venue to fight the case.*
>
> *LCF (5): "*बिलकुल। ये काग़ज़ी मामला है। Court मैं ही लड़ना पड़ेगा।
>
> *(Yes. This is official matter. We need to fight in the court)."*
>
> *LCF (3) disagreeing: "Court कचहरी की अलग बात है। यहाँ अलग तरीक़े से बातचीत होती है और बाहर अलग तरीक़े से। बाहर लोग क्या बात करते हैं वो ज़्यादा मायने रखता है। Court में तो ज़्यादा बात समझ ही नहीं आती। ज़रा सा समय देते हैं। उसमें आदमी क्या बोले क्या समझे। बाहर की बात अलग होती है। एक दूसरे से हम बात करते हैं, बाक़ी लोगों से बात करते हैं, उसका असर अलग होता है।*
>
> *(The court is a different thing. There we talk differently, outside we talk differently. Outside the conversations, we have those are more valuable. In the courts, you can't understand half the things. They give limited time (for hearing). What to say and what to think during that time. Outside it is different. We can talk to each other, with others. That has a different impact)."*
>
> *LCF (5): "बाहर तुम कितनी भी बात करो, कुछ भी बात करो, किसी से भी बात करो। होता तो वही है जो court आदेश देता है। बाहर बात करने का कोई फ़ायदा नहीं है। उससे कुछ नहीं होता।*
>
> *(You can talk as much as you want, with whomever you want outside the court. What action is taken depends on what the court orders. There is no point in talking to people outside. It does not make a difference)."*

While the brothers could not come to an agreement, the conversation does raise some very important points about the various venues of advantages and disadvantages of engaging with the judiciary and the political and public sphere. One it rehammers the above discussion on the restrictions of the judiciary. The working of the law takes the form of lengthy processes involving extensive paperwork. While the technical judicial language and the rigid structure essentially keep the farmers from participating on their own terms, it becomes difficult to move the discussion to a more favourable platform. Therefore, the discussions keep happening in the comparatively unfavourable judicial platform.

Housing rights activist (2) echoes this,

> *"The problem with the judiciary is that you'll have to fight judiciary in the judiciary. You cannot challenge the court out of court. That's a big problem. If you have a problem with an MP (member of parliament) or somebody you can go to the judiciary. But if you have a problem with the judiciary you'll have to go to the judiciary. Yes, if you have the money, you can hire good lawyers etc. But the bigger problem is the kind of people in the courts. We say judiciary and we do not talk about judges. The judges are the same people who hate the poor people (upper-middle-class). They are not on the same page as us. This is a problem, yes. Another thing I mentioned is that it (courts) is very adversarial in nature too. Unless and until a lawyer goes and says in the first meeting that yes, a lot of forest land has been encroached, but it also houses thousands of families who have lived there for 30 years, and their livelihood belongs to this place. So, what should be done to those families? As well as protecting the environment. Then the court will have to have a say. What is happening today is that this second context is not there. In any NGT hearing, you will not hear a word about people living there. Words used are 'trespassed' and 'encroached', these are very dangerous words. Because of these people (farmers) lose halfway only. The judiciary, people in the judiciary, that become judges and lawyers nowadays, they do not know about land rights. Those days are gone when judges used to roam in bastis (slums) to understand them. Nowadays the judges do not care."*

The statement restates the limitations of the judiciary and the criminalised identities that the farmers are burdened with. The criminalised terms used to refer to the farmers are deliberate and 'techniques of rule' (Bhan 2016, p.72). The discussions happening in courts mean that half the battle is already lost. Interestingly, the restrictions and unhappiness with courts were expressed by almost all mainstream environmentalists too. Environmentalist (5) stated,

*Unfortunately, the law is structured, and ultimately the powerful are getting away with many things. Apart from the malva (debris), the Commonwealth Games Village is there, and the Ravi Shankar case (World Cultural Event (2012) by the Art of Living mentioned in Chapter 4), these things are not evicted. Whereas the farmers are being evicted. Now the thing is if this is a problem with environmentalists, with PIL (Public Interest Litigation) or a more general structure where the interests of the powerful are served no matter what happens. We are applying all these things in a society where the power equations are so stewed. So, we can't say if the PIL was bad. In terms of the desire to clear the floodplains of all kinds of encroachment. We can't say if the intent itself is bad or not. Personally, I think that the PIL is a last resort. However, some people do it as the first thing… When you look at courts from a larger socio-political structure, the courts are embedded in our societal structure. We are a product of that. Their whole vision, biases, and power equations with them, will reflect what is there in society. So, there are limits as to what the judiciary will be able to deliver. Maybe do some things here and there it's fine. But to expect the judiciary to make a highly progressive and equitable judgement… the people in the judiciary are the products of the same society, actually, from a more elite section of the society. And you will see this in every case. You see Delhi typically, the Delhi polluting case where the polluting industries were thrown out of Delhi (elaborated on in Chapter 4). That was a very major case. It doesn't matter what happens to the workers or the places that the factories moved to. Delhi was just supposed to be clean and not polluted. That bias is there in the judiciary itself. Environmentalists should also recognise the limitations of this judicial intervention. This is why this problem requires societal mobilisation and building a case within the society. And unfortunately, as we know that will take a long time.*

Here the environmentalist is echoing the land-claiming farmer (3)'s argument. The solution is placed on social mobilisation instead of the judiciary. The inherent upper-middle-class bias of the judiciary is recognised to be incapable of giving an equitable judgement. Hence, this path followed by mainstream environmentalists to fulfil environmental improvements, in the very essence cuts out of the housing rights issues. This is seen played out within the implementation of the rejuvenated Yamuna initiative too. Therefore, there is a need for red-green lawfare that combines environmental and social law (Vallejo and Gloppen 2013) following the principles of environmentalism of the dispossessed. Housing rights lawyer (2) takes this forward by connecting the importance of social mobilisation specifically of the farmers.

*A true environmentalist will realise that they have to take people together. If you have a strong movement on the ground, then the courts will know that there are*

*people who will criticise if they do not do anything. It is reflected in the court orders. This movement will be taken up by people. Rich people are not bothered. People who are affected will be the ones who come and fight. And they will fight because for them it's their life. It's not about going and protesting for 2 hours.*

Mass mobilisation is recognised as an important aspect of making the resistance stronger in the political, judicial, and public spheres. In other words, there is a wide call from farmers, housing rights activists, mainstream environmentalists, and lawyers (environmental and housing rights) to one, link the environmentalism of the bourgeois and dispossessed. Two, to take the conversation to the upper-middle-class. This breaks the apparent binaries between the two and sets common goals. This is extremely important as discussed above, despite the crumbling track record of the co-resistance of the farmers and the mainstream environmentalists, there is still a willingness for dialogue. My conversation with a boatman expresses this willingness for dialogue.

*Looking at the notebook and pen that I was carrying, a boatman asked if I was 'media वाले' (person). He explained his efforts to save his land,*

*Boatman: "कोई भी media से आता है मैं उनको पक्का हमारी हालत के बारे में और नदी के बारे में बताता हूँ।*

*(I talk about the river pollution and our plight to any media person that comes to the area)."*

*Q: Why?*

*Boatman: "मुझे उम्मीद है कि लोग जब जानेंगे हमारे साथ क्या हो रहा है तो वो हमारा साथ देंगे। जितने ज़्यादा लोग हमारे साथ चलेंगे उतनी ज़्यादा हमारी बात सुनी जाएगी... जब से हमें पता चला कि यहाँ पानी छोड़ने का सोचा है तब से हम नेताओं के चक्कर लगा रहे हैं, कि कहीं और पानी छोड़ें। सारे नेताओं के पास जा चुके हम, AAP, BJP, Congress.*

*(I am hopeful that if people get to know what is happening with the river and with us then they will support us. The more people support us the more we will be heard… We got to know that there are plans to direct water to this area (the area where his residence and livelihood are based). We are going to politicians asking them to direct the water flow somewhere else. We have gone to all leaders, AAP, BJP, and Congress)."*

*Q: Do you think people will listen?*

*Boatman: "हाँ। उन्हें पता तो लगना चाहिए।*

*(Yes. They should at least know.)"*

Media, which is still dominated by the upper-middle-classes (Acharya 2017)[56] is increasingly being used by the farmers, fisherfolk and housing rights activists to spread their message. The boatman explains that he not only sees engaging with the media as favourable but also highly important. This also shows a willingness to engage with the upper-middle-class as opposed to the assumption that all upper-middle-class "hate the poor people" as declared by Housing rights activist (2) mentioned in the above section, echoing my interaction with most housing rights activists and lawyers.

Thus, the dispossessed suffer from, resist, and make use of tools generally associated with bourgeois environmentalism. This willingness opens new pathways and possibilities to narrow the gap between the two actors. As a result, new coalitions are being formed as could be seen in the public meeting held by the People's Resource Centre (September 2022) discussing urban agriculture in Delhi[57], collaborative meetings held (February 2022) to discuss DMPD-41 (2021)[58], the preparation of the 'Bottom-Up Mapping of Yamuna Floodplains in Delhi' Report (2022) [59] and *Chalo* Yamuna walks (Let's go to Yamuna)[60] by *Main bhi Dilli* (I am also Delhi) to name a few. Overall, the reason for collaborations to be successful in these platforms as opposed to organisations such as the Yamuna Monitoring Committee can be pinned down to moving away from looking at the socio-ecological problems from a technical perspective to a social science perspective. In other words, these platforms outside the judiciary make space for a wider multiplicity of knowledges. The farmers within these platforms are seen as knowledgeable actors with an agency as

[56] Media plays an important role in the cultural politics of controlling the 'public transcript' by repetition of symbols, images, imaginations, and identities (Acharya 2017, p.380). The aesthetic nature and a world-class city imaginary are intensely circulated through the media without mentioning the violence and marginalisation that has enabled it.

[57] A draft citizen policy from urban agriculture in Delhi was formed with the participation of farmers, entrepreneurs, researchers, media, and civil society organisations.

[58] After the publication of DMPD-41, these series of meetings were held to share information and ideas among various actors. These were then presented to the DDA as suggestions for improvement of the Plan.

[59] The report undertakes the mapping of the floodplains along the 22 km stretch of Yamuna in Delhi. The lives and livelihoods involved in agrarian practise as well as their contribution to Delhi's foodscapes are highlighted to strengthen the case for recognition and regulation of farming along the Yamuna in Delhi through the MPD-41.

[60] Walks are organised where the farmers took the participants through the Yamuna floodplains for introducing them to the farming practices in Delhi, their evictions, and future plans and to form a collective re-imagination of the riverfront.

opposed to illegal polluting agents. This connects to the above discussion about the difference between seeing farmers as polluters as opposed to environmentalists.

These actions not only break away from the judicial focus of the resistance but also inform the very judicial process that limits their voice and siloes the various groups. In other words, while the judicial process limits the voices being heard and divides the various actors, coalitions are still formed in spaces outside the platform and making their mark, such as the inclusion of urban farming in DMPD-41 (DDA 2021). This is elaborated on below. In short, politics is reinvented outside the limits of the judiciary. While still staying limited to a niche audience, the mere presence of these conversations presents a possibility of spilling into the wider discourse. Again, these conversations become crucial as they have been missing from the environmental discussions in especially urban India.

### 7.4.2 Spatial resistance- Master Plan Delhi

As discussed in Chapter 4, the unplanned/informal mode of operation is common among the state, the upper-middle-class, and the poor, making it the dominant type of development in the city. The DDA itself goes against these plans often as can be seen by the construction of various structures like the metro project, Delhi Noida Direct (known as DND), Gautam Budh Park, Akshardham Temple, Commonwealth Games Village, and the Delhi-Meerut metro to name a few. Thus, while the farmers go against the Master plan, they can be said to take calculated risks based on patterns of the state. As discussed in Chapter 4, the main reasons cited for targeting the farmers are one, using chemical agents such as pesticides and polluting the river (making them polluters), and two not following the Master Plan of Delhi (making them illegal encroachers). Chapter 6 and the above section recognise that narratives around farmers being polluters are only superficially about the environment. A narrow definition of who matters in the management of shared environments is seen. Building on this analysis, in this section I explore how the farmers deal with the tag of being an illegal encroacher by engaging with the Master Plan itself and their everyday claiming of space as important ways of resistance.

The Draft Master Plan Delhi 2041 (DMPD-41) (DDA 2021) opened for public objections and suggestions in September 2021. This opportunity was taken up by the farmers to make official claims on the right to farm in the floodplains. Tenant farmer (11) described how she

participated in giving feedback to the DDA during online consultation for the formation of DMPD-41 (DDA 2021).

> *TF (11): "बहुत सारे लोग हैं वहाँ। हम भी  गए। हमने अपनी समस्याएँ रखी सबके सामने... यही बोला की खादर में खेती की व्यवस्था बनी रहे। पर मुझे नहीं लगता कि उसका कुछ होगा।*
>
> *(There were a lot of people in the meeting. We also went… We told them to let us farm in Khadar. But I do not think anything will happen)."*
>
> *I informed her that the DMPD-41 mentions that "specific locations may be identified for permitting agriculture in the flood plains."*
>
> *She happily exclaimed, "सच में! देखते हैं अब क्या होता है।*
>
> *(Really! Let us see what happens now)."*
>
> *Q: "Do you think that the JCBs (common machines used to run down huts and destroy crops) will stop coming now?"*
>
> *TF (11) unsurely: "हम तो कोशिश कर ही रहे हैं। देखते हैं क्या होता है।*
>
> *(We are trying. Let us see what happens)."*

The above conversation reveals that the farmers are actively trying to participate in producing the MPD-41. This shows an important form of environmental resistance by the farmers. Their advocacy for the floodplains to be green, while again stemming from livelihood requirements does keep out grey infrastructure.

Another aspect revealed through this conversation is the distrust that the farmers have in the DDA. Tenant farmer (11) is not only surprised about farming being included in the floodplains but is also unsure if this is going to result in decreasing the threat of evictions. The reason for this distrust is reflected in my interaction with the DDA officer (3) about feedback received by the department from farmers and housing rights activists and how it is dealt with.

> *Q: Have you received any recommendations from farmers and housing rights activists?*
>
> *DDA officer (3): "नहीं।*
>
> *(No!)"*
>
> *Puzzled I informed the officer that the many farmers and housing rights activists had informed me that they had indeed written letters to the department. "They must not be reaching the department then, right?"*
>
> *DDA officer (3) chuckled "हाँ, आते हैं। हम देखते हैं कुछ-कुछ। वही सब लिखा होता है।*

*(Yes. They keep on writing)."*

*Q: Oh, so they do reach the department. So, what happens then?*

*DDA officer (3): "सबमें वही चीज़ लिखी होती है।"*

*(Yes, they come. We open some. It is all the same)"*

*…*

*Q: So now the DDA itself has allowed farming on the floodplains in the new Master Plan (DMPD-41). What do you think?*

*DDA officer (3): हाँ लिखा तो है। *Shruging* पटानी क्यों किया है मेरे हिसाब से तो नहीं करना चाहिए था।*

*(Yes, it is written (in the DMPD-41). *Shrugging* I do not know why they did it. According to me, they shouldn't have).*

There is a clear attitude of dismissal from the DDA officer. Not only are the letters dismissed, but most are forwarded to junk without ever being opened. Similar to the criminalisation within the judiciary discussed above, the conclusion drawn is that the discussions of farmers being part of the floodplain rejuvenation plans or contributing to them in any capacity whatsoever are not worth having. Thus, there is an unwillingness to reconfigure the environmental discourse. Here, it is not the feasibility but social acceptability that confines the possibility of viewing the farmers as part of the solution as discussed in Chapter 6.

Moreover, as feared by tenant farmer (11) while farming might be allowed in the floodplains, the current farmers are still being evicted. This then opens the possibility of potentially leasing out the new inclusion of "urban farming" in the MPD 41 to other big actors through the envisioned "private sector-led development" as discussed in Chapter 4. In other words, similar to the above discussion about the various judicial and policy tools won by the farmers being unable to guarantee their rights, even the provision of farming in the floodplains, while a positive step, is not a guarantee of the safety of the current farmers. Nonetheless, due to the Master Plans being used statutorily by the judiciary, the inclusion in the Master Plan might strengthen their resistance by removing the 'illegal encroacher' tag (interviews with various housing rights activists and lawyers).

### 7.4.3 Everyday rearranging of space informally

Given these judicial and political institutional hurdles almost closing off official channels, rearranging the space informally can be recognised as one of the prime forms of resistance by the farmers (Zimmer 2017, p.595). They implement their own land-use ideas with sustainable household and livelihood arrangements as discussed in Chapter 6. Farmers create farms, schools, temples, treehouses, huts, *कच्ची* (temporary) roads and so on to make the floodplains liveable. This is not done in an anarchic fashion and has a clear informal structure ripe with negotiation. Often the state is contacted through a *प्रधान* (self-appointed spokesman), linked to one of the main political parties whose main role is to solve the problems in exchange for electoral votes and support. As stated in Chapter 5, these interactions expose the farmers to even more vulnerability. However, Ramakrishnan (2016) theorises 'corruption from below', residents' own attempts to navigate political patronage to gain benefits and institutional access. Official legalities and illegalities are navigated through these means by most actors in the Global South. The farmers have various entangled relationships with the state. A Delhi Jal Board water tanker provides potable water once a week depending on weather conditions to tenant farmers. The land-claiming farmers sell raw materials such as cattle dung to state contractors who disperse it as manure in plants in public spaces all over Delhi such as under flyovers, on sidewalks, in public parks and so on for beautification (interview with a state-employed private contractor). These transactions continue to take place within the site of legality/illegality, encroacher/resident. Thus, while making farmers more vulnerable, these practices also become a tool for negotiation and engagement. This informal structure can be seen through my visit to the South Delhi Biodiversity Park and my conversation with DDA employee (3).

> *When we approached the pond in the park, we saw a herd of buffaloes making their way toward it. The DDA employee (3) immediately called for a guard to come and shoo away the buffaloes. The guard with his लाठी (stick) tried threatening the buffaloes to no avail. A few minutes later a farmer arrived at the scene. The DDA employee (3) told the farmer to "stick to the agreement."*
>
> *After we left the scene, I asked the officer if there was a formal agreement between DDA and the farmers.*
>
> *DDA employee (3): "नहीं नहीं। याहा पे पहले भैंस घास चार्टी थी। जब हमने ये park बनाना शुरू किया तो भी घुसी रहती थी याहा। हम इतनी महँगी घास उगते हैं और वो सब खा जाती थी।*

*हमने बहुत रोका पर अब क्या करे। फिर हमने गौशाला वालो को बोला की भैंस Art of Living वाले इलाके मैं ही रखे। पर ये तालाब देखते ही अभी भी आती है याहा।*

*(No No. Buffaloes used to graze on this land. When we started building a park they used to break in all the time. We have grown such expensive grass. The quality is very good. They used to eat it. We tried stopping them but what can we do? Then we spoke to the cow herders and told them to keep the buffaloes behind the Art of Living section (section discussed in Chapter 4). But they see the pond and still come here).”*

*Q: How common are these informal agreements?*

*DDA employee (3): “Yamuna के आस-पास जितनी भी खेती होती है आपको क्या लगता है हम को नहीं पता क्या? हमारी मंजुरी के बिना हो ही नहीं सक्ती। ऊपर तक सबको पता होता है। अब तो इलाका मेरे नीचे है। याहा अगर कल खेती होने लगे तो ऐसा हो ही नहीं सकता की मुझे पता न लगे।*

*(Whatever farming happens next to the river, do you think we do not know about it? Without our agreement, it cannot happen. Everyone knows till high levels. Now for example this section is under me. If farming starts here, then it cannot happen that I do not get to know).”*

Image 6. Pond in the South Delhi Yamuna Biodiversity Park, image by Shivani Singhal, August 2021.

This conversation shows the active involvement of the state with farming activities on the floodplains intimately at the highest level. However, more importantly, it not only hints at the possibility of farmers having a space within bio-diversity parks but showcases that it is already happening. This is extremely important as seen throughout the thesis, even this possibility is dismissed by various officials. This recognition of the current practices then means that the conversation changes from *whether* the coexistence of bio-diversity parks and farming is possible to *how* it can be made possible in an equitable manner.

### 7.4.4 The river/Nature

Another resistance factor can be recognised as the river itself. The river resists human manipulation and land regulations by swelling, something that will become even more unpredictable due to the melting glaciers due to climate change (*Namami Gange* 2021, p.12), as discussed in Chapters 1 and 6. Throughout the fieldwork, the farmers kept asking how the state was thinking of protecting the new installations such as benches, plants, and brick roads from the force of the river. Land-claiming farmer (4) frustratingly stated,

> *"कितने भी मेहँगे पौधे और घास लगाले। अगले साल तो दोबारा लगाना ही पड़ेगा ना।*
>
> *(They can plant as expensive grass as they want, next year they'll have to grow it again)"*

Similarly, tenant farmer (8) stated,

> *"सोने का महल बना लें चाहे ये लोग... कभी ना कभी तो पानी आएगा ही।*
>
> *(They can make a fort out of gold. That will also fill up with water)."*

This was also confirmed by the DDA employee (3) who stated that the work in the South Delhi Yamuna Biodiversity Park was delayed due to the river waters destroying the under-construction pillars discussed in Chapter 4. In the floods of July 2023 similarly, 90% of the 90,000 saplings and 2.9 million riverine grasses planted in the bio-diversity parks were uprooted (Sharma 2023). As mentioned in chapter 2, this produces new opportunities for profit-building under the PPP arrangements.

Image 7. Pillars being constructed submerged and destroyed due to the floodplains filling up with water in September 2022, Image by Urmila Singhal.

Moreover, the swelling river also shows spatial resistance by reclaiming the floodplains by not following the land use patterns dictated by manipulation by the state. This sentiment is shared by environmentalists too. Environmentalist (2) expressed,

> *Environmentalist (2): "लेकिन नदी, अगर अपने पे आती है, और अपने लिए चीजें तय करती है, जैसे कि 1973, 1994, 1997 और हाल ही में 2008, 2010, 2011, 2013 और 2019 में।*
>
> *(But the river, if it comes into its own, and decides things for itself, like in 1973, 1994, 1997 and the most recently 2008, 2010, 2011, 2013 and 2019 (years when the river swelled substantively))…"*
>
> *Q: Commonwealth Games Village got flooded but still, there is still potential that the government might build more structures on the floodplain.*
>
> *Environmentalist (2): "हाँ हाँ, लेकिन उसके बाद उन्होंने कुछ और construct नहीं किया। उनका plan हर जगह high rise बनाने का था। इसलिए उन्होंने अब तक ऐसा नहीं किया है।*
>
> *(Yes, but they did not construct anything else after that. They planned to build high rises around the area too. They have not until now because of this reason)."*

Here, despite years of doing *धरना प्रदर्शन* (sit-ins), going to various state departments, writing letters, and filling petitions in the judiciary the environmentalist gives the credit for concretised structures not mushrooming on the floodplains to the river itself which 'flooded' the same year as the construction of the Commonwealth Games Village (2010) and water reached inside the area (Colopy 2012). This event was extremely important as to

allow construction the land use in the Master Plan was changed to the extent that DDA was successfully able to argue in the Delhi High Court that the area was not part of the floodplains at all (Follmann 2015, p.219). How this land use change has provided these structures with even more legislation within DMPD-41 (DDA 2021) has been elaborated on the Chapter 4. Looking at the pattern of land use change after evicting farmers leading to opening the floodplains to concretisation is re-iterated here. Emphasising this, tenant farmer (13) stated,

> *TF (13) "वैसे तो ये जो भी बनाएंगे वो डूब जाएगा तो कुछ बनाना नहीं चाहिए। पर अगर बना दिया तो फिर मैं मानता हूँ कि उसे बचाने के लिए ये लोग कुछ करेंगे। जो भी अभी तक बनाया है उनको तो बचाया ही है।*
>
> *(Whatever they make here will get submerged under water. But if they do make something then to protect it, they'll take other measures (embankments). They have protected whatever they have constructed till now)."*
>
> *Q: But they are concerned about the restoration and rejuvenation of the floodplains, right?*
>
> *TF (13): "इनको उससे कुछ मतलब नहीं है।*
>
> *(They are not concerned about that)."*

## 7.5 Conclusion

This chapter answers the final research question: *How do the dispossessed negotiate, navigate, and compete under the rejuvenated Yamuna initiative?* To answer this question, first, it needs to be explicitly stated that the dispossessed do negotiate, navigate, and make claims under the rejuvenated Yamuna initiative. This is because as discussed in chapters 1 and 4, the current literature on environmentalisms in Delhi, while mentioning the actions of these farmers (Baviskar 2020; Follmann 2016, 2015), does not recognise them as active agents of *environmental* change. Their actions are dismissed as stemming from livelihood, somehow making it less than. While it is not argued that livelihood worries come at the forefront of the resistance, their actions cannot be limited to the livelihood ecosystem. By incorporating the environmentalism of the dispossessed theory with the bourgeois environmentalism analyses that dominated the past two decades of urban environmentalism literature, this chapter extends the conversation and includes their actions to the environmental ecosystem too.

Next, it is established how the farmers are barred from being identified as environmental agents through institutional restrictions. One of the main factors that the farmers add to the environmental discussions in Delhi is connecting them to issues of justice. In other words, they make it political. However, this, instead of being considered as something that makes the discussion holistic, as discussed in chapter 2, is the very reason for the dismissal of farmers from participating in the environmental discourse. In other words, the farmers *extend* the environmental discourse from its current technical realm to the political and social realm and are not *limited* to the social realm. Through this, they are able to address not only their own rights and needs but also the rights of the river and the needs of the city itself.

After understanding the various limitations levied on the farmers, the tools used by them to make claims, navigate, and negotiate within the various rejuvenated Yamuna initiatives can be discussed, empirically contributing to the urban environmentalism literature in India. Various styles of political engagement are used by the farmers to mobilise and seek influence. The limitations of the judiciary are attempted to be balanced out by mass mobilisation. This is interesting as discussed in Chapter 2, specialised courts and tribunals in environmental cases are 'exploding' all over the globe as an answer to the environmental crisis (Pring and Pring 2016, p.1) for the "chemotherapy for the carcinogenic body politic" (Baxi 2002, p. xvi). However, Baviskar (2020, p.81) states that the only change that the judiciary has been able to bring is to create a grand performance of outrage towards the state for being incompetent and projecting the judiciary as swift and strict. Therefore, while one of the roles of the NGT can be recognised as protecting the environment from the state, there is no such official body to protect from the judiciary. In other words, now, the farmers have to resist both the state and the judiciary. Therefore, it is interesting to note that the farmers tend to turn towards reaching out to the upper-middle-class to weigh in against the judiciary.

Despite this, while the courts are termed as an exclusive arena of the bourgeois environmentalists (Baviskar 2020; Bhan 2016; Gill 2016; Shrotria 2015; Vallejo and Gloppen 2013; Karim 2012), now farmers too are actively fighting cases in the courts. Thus, the demarcation between bourgeois environmentalists using the courts and dispossessed using the state to meet their ends (Bhan 2016) is diminishing.

Another tool used by the farmers is spatial resistance. Along with every day negotiating with state officials to informally claim space, they also engage with the Master Plan of Delhi. Due to these measures, the farmers have successfully amended the Master Plan of Delhi and gained favourable judgements to gain the Right to the City. However, these wins fail to guarantee the safety of the current farmers as evictions are still ongoing.

Nature itself is also brought into the resistance against the concretisation of the floodplains. The farmers along with the mainstream environmentalists have a sense of recognition of nature as an actor almost resisting along with them. The farmers differ from the mainstream environmentalists however as they recognise the river as not only resisting the state and the judiciary for its own sake (environmental) but also restoring social 'order' by making official plans impossible. Moreover, this frames the river as a solution instead of a problem. In the same way, the dispossessed need to be seen as part of the solution, instead of the problem as discussed in Chapter 6.

# Chapter 8 Conclusion

## 8.1 Introduction

Nature is conceived and understood in various ways. The pollution in the river Yamuna is a pressing matter. This is changing the relationship of various actors with nature. The river pollution has been taken seriously by the state and the judiciary and various plans and policies such as the various Yamuna Action Plans (1,2 and 3) along with the current integrated push by the Yamuna Monitoring Committee (2020) have been implemented. While these actions deal with various aspects of pollution such as sewage, industrial effluents, cultural waste, and so on, this thesis takes a focused approach and analyses the creation of biodiversity parks. Much like the pollution in the river, even these solutions are changing the relationship of various actors with nature. The floodplains are being made upper-middle-class-friendly through the creation of parks and the erasure of the current habitants, the farmers. While the long-term impact of the plans on the pollution levels would be revealed only after a few years (no decrease in river pollution has yet been noted), its vast social degradation is happening right now.

This thesis addresses the tensions between development and environmental protection, world-class and traditional, outdated and modern, bourgeoise and dispossessed, nature and society, institutional and non-institutional, and formal and informal. This is done through the political ecology framework using the concepts of waterscapes and politics of knowledge. While moving away from the current dominant socio-ecological system is desperately required, a just transformation needs to occur being mindful of the power dynamics at play. Similar phenomena can be seen globally.

The knowledge/power relationships in the implementation of the rejuvenated Yamuna initiative have been examined through the ethnographic case study of Chilla *Khadar*. It is claimed that until the larger socio-ecological complexities of environmentalism and inequity are not considered within various solutions, they will fail to provide results. While the initiative claims to have a social focus, within implementation the focus shrinks to a form of exclusionary participation. On the ground level, this exclusionary participation translates to violence. This exclusion is not random and is structured by power relations.

The main questions that guide the research are:

1. What power dynamics are at play in the Yamuna floodplains?

2. What is the nature of the environmentalism of the farmers and how does this relate to the environmentalism practised in the rejuvenated Yamuna initiative?

3. How do the dispossessed negotiate, navigate, and compete under the Rejuvenated Yamuna initiative?

Conceptually to answer the above questions broad approaches from various disciplines such as anthropology, sociology, development studies, political economy, geography, planning, decolonial studies, feminist theories, policy, and legal studies have been applied.
My theoretical contribution involves a comprehensive exploration of various socio-ecological changes, by studying the conflicting environmentalisms of the bourgeois and the dispossessed using the political ecology framework. On the other hand, my empirical contribution comprises a nuanced ethnographic study of farmers residing in Delhi's floodplain concerning the official schemes for river rejuvenation. By combining these theoretical and empirical insights, I delve into the complexities of creating a more just waterscape.

The thesis in chapter 1 makes clear the research aims, and questions being answered. It situates the study in the Yamuna floodplains of Delhi and gives a broad picture of the socio-ecological crisis being faced. It then states the contribution of the thesis by putting the thesis in dialogue with the environmental governance literature in India theorised by bourgeois environmentalism and the environmentalism of the dispossessed.

Chapter 2 then conceptualises the political ecology framework and uses it to break the binaries between the environmental theories of the bourgeois and the dispossessed. Assisted by the concepts of waterscape and politics of knowledge, three main points of power dynamics, knowledges and resistance are highlighted to guide the finding chapters.

Chapter 3 lays out the methodology of the thesis and discusses the challenges embedded within the ethnographic process such as positionality, access, responsibility, fear, identity, flexibility, and ethics. The formal and informal processes driving the methodology have been reflected on. Special attention has been paid to the impact of COVID-19 on the research process.

Chapter 4 critically examines the transforming Yamuna waterscape. This 'seeing' of the socio-ecological dimensions of the rejuvenated Yamuna initiative by thick description politicises the initiative. By exploring the plans, policies and judgements, the chapter identifies the structural inequalities embedded within the current form of the bio-diversity park implementation.

Chapter 5 studies the political ecology of intersectionality and differences among the farmers and the impact of these factors on their volatile place within the Yamuna floodplains. It answers the first research question focusing on the socio-political power dynamics, vulnerabilities, and exclusion. This understanding informs the politics of knowledge, and resistance in the following chapters.

Chapter 6 uses the concept of politics of knowledge drawing from the previous chapter puts in conversation the environmentalism of the farmers with the conceptual foundation of the bio-diversity parks. It answers the second research question looking at how the nature of the two environmentalisms relate to each other. This empirical chapter delves into expanding epistemological understandings of ecology.

Chapter 7 analyses the competing environmentalisms at play. Here various approaches to resistance such as the livelihood/environmental, formal/informal, judicial/political, and human/more than human are examined. The chapter answers the final research question looking at the navigation and negotiation of claim making by the farmers. Here the tensions and synergies between tools within bourgeois environmentalism and environmentalism of the dispossessed are examined.

This concluding chapter summarises the key findings of all empirical chapters through the theoretical framework in chapter 2. This is followed by future research ideas and final remarks.

### 8.1.1 Research question 1: What power dynamics are at play in the Yamuna floodplains?

In chapter 5, I establish the farmers to have a complex, messy, and meaningful relationship with the river and with each other. This is important because currently, the rejuvenated Yamuna initiative, much like past development claiming to create a 'world-class' image of the city such as the creation of the Jubilee Park fail to address the socio-historical aspects of the area (Follmann 2016). Interlinked with the liberalisation of economies, urbanising the environments has become integral to making cities 'world-class' (Follmann 2015; Bhatt and Jamil 2012; Ghertner 2011; Brosius 2010; Fernandes 2004). As a result, the violence in creating these structures where certain sections of the society have no right to exist gets hidden (Baviskar 2020; Cornea et al. 2017; Bhan 2016; Gill 2016; Dupont 2011; Batra and Mehra 2008). This erasure can be seen starkly on the river floodplain maps, in chapter 4, which are marked as empty and available for the creation of the biodiversity parks.

These environmental policies create widespread socio-ecological dispossession. The marginalisation caused is not accidental or unfortunate. As stated in chapter 1, different types of pollution are dealt with differently. To recap, while institutional provisions are made to capture large quantities of upper-middle-class sewage and treat it for free despite the illegality of some houses, the minuscule pollution caused by chemical agents used by farmers is not only dealt with by stopping its use but by evicting all farmers. As a result, greenwashed policies can be seen as tools used to target specific groups to capture resources. In other words, controversial projects causing socio-ecological degradation are pushed through successfully by framing them as environmental (Rigolon and Németh 2018; Pearsall and Anguelovski 2016; Ross 2011).

By acknowledging the socio-ecological dispossession, the power dynamics at play can be unpacked. While chapter 4 establishes that the rejuvenated Yamuna initiative plans are political, chapter 5 analyses the multi-layered socio-ecological inequalities embedded in these plans. These inequalities and vulnerabilities along with their strengths shape the dynamic nature of environmentalisms of the farmers. It is recognised that the farmers sit on multiple exes of power and vulnerability simultaneously. However, they all are experiencing socio-ecological dispossession in various ways. Thus, while all farmers are experiencing socio-ecological dispossession, equitable outcomes will only be produced to a greater extent

when questions about power are explicitly addressed (Discetti et al. 2020; Krings and Schusler 2020; Jain 2018; Heynen et al. 2006; Collier and Collier 1967).

This is important as the 'dispossessed', in this case, constitute multiple intersectionalities of class, ethnicity, gender, religion, and education that create multi-level and complex experiences of vulnerability and power. This analysis strengthens the environmentalism of the dispossessed theory as it addresses the various criticisms such as painting a romanticised picture of the marginalised, putting them on a pedestal, and ignoring the socio-ecological dispossession caused by these marginalised groups themselves (Williams and Mawdsley 2006). In other words, this analysis avoids holding extreme positions that might not be true. Such considerations also avoid socio-ecological movements being captured and co-opted by exclusionary groups through a nationalistic or religious narrative, as discussed in the chapter, to push their agendas (Baviskar 2005).

As a result, the farmers experience access to resources, power, and ownership along with displacement and dispossession to various degrees. In other words, power does not operate linearly in a top-down manner. Rather, environmentalism is shaped by violence from *above* (Bakker 2007) due to various governmental plans and judicial judgements, from *within* (Negi 2011) due to intersectionalities and *internally* due to biases being internalised by the dispossessed. To be truly holistic with aspects of 'citizens as actors' (*Namami Gange* and NIUA 2020, p.63), the consideration of these power dynamics within environmental policies is necessary. A failure to do so ends up reinforcing segregation and reproducing socio-ecological degradation. Neoliberal environmental policies produce new forms of injustice. Simultaneous participation and resistance within such an environmental structure make environmentalisms multi-dimensional. As a result, to capture these multi-dimensional phenomena, this thesis makes use of the environmentalism of the bourgeois and the dispossessed.

Despite these inequalities, the farmers and fisherfolk are able to carve favourable spaces for themselves within formal and informal channels by claiming land, leaning on generational wealth and power, taking collective action and working with the cycles of nature. Moreover, it can be claimed that it is these very informal channels through which the farmers, to a certain degree, are able to get recognition within official channels. On the other hand, official mandates when applied on-ground must navigate and sometimes even actively

make use of these informal realities. All actors are both subjects and actors depending on various capabilities. In other words, governance is not operated by single institutions and instead is a process navigating across temporal strands with heterogeneous influences (Cornea et al. 2017; Conca 2005). Therefore, when apolitical plans, policies and judgements turn a blind eye to these complex realities, they inherently fail. In other words, official and judicial institutions do not inherently hold power. Rather, these official mandates are applied in informal manners within these complex realities. Solutions are never applied in a social vacuum (Ross 2011). As a result, through a political ecology analysis, socio-ecological relations are not just theoretically revealed. Rather, such an analysis highlights phenomena that need to be considered within policies to be successful. Thus, such as political ecology analysis is necessary for the practical implementation of policies to create a more equitable waterscape.

In Chapter 5, through the political ecology framework, I do not just analyse how socio-political factors create nature but also how the romanticised and cultural construction of nature is used to create socio-political segregation and inequalities. Here, the neoliberal elements of green consumption entangle with the social intersectionalities mentioned above. Apolitical environmental solutions through these simultaneously global, national, and local discourses become an institutional tool to first produce social identities such as 'dirty' and 'criminal' and then violently deal with them. These environmental discourses become instrumental in dictating who participates in what type of consumption. They aim to create utopic spaces that are free from material pollution and a social mixture (Brosius 2010; Heynen et al. 2006). In other words, environmental policies become tools of surveillance and socio-spatial segregation. While environmental solutions such as creating bio-diversity parks and growing organic vegetables are promoted, they are only made available to certain sections of society.

### 8.1.2 Research question 2: What is the nature of the environmentalism of the farmers and how does this relate to the environmentalism practised in the rejuvenated Yamuna initiative?

In chapter 6 I focus on the knowledges and imaginaries that unjustly create the bio-diversity parks. Through ethnographic and document analysis, the decision to evict farmers for

environmental rejuvenation is questioned. While state and judicial discourses frame the solutions as the only choice available to rejuvenate nature for the betterment of 'all', this chapter analyses the multiplicity of problems and solutions, full of nuances and driven by power dynamics. Moreover, expanding from chapter 4, it establishes that while some trade-offs such as leisure for the upper classes are made room for within the rejuvenated Yamuna initiative, other trade-offs about the livelihood and residence of farmers are not considered worthy. This again shows that decisions that increase marginalisation and vulnerability are made consciously and are not unfortunate.

By analysing the nature of the environmentalism of the farmers and how it relates to the environmentalism practised in the rejuvenated Yamuna initiative, I claim that it is not just a question of *which* knowledge is being recognised, as theorised by bourgeois environmentalism relating to the creation of parks (Baviskar 2020; Negi 2011; Brosius 2010; Mawdsley et al. 2009) but also a question of *whose* knowledge is being recognised. Previously under the riverfront development plans which aimed to concretise the floodplains, situated knowledge was not incorporated which made the plans "*far from ground reality*" (Expert Committee 2014, p.41). However, this time round, while the situated knowledge is being gained through a 'trial and error' method, the farmers, who already are aware of aspects of it are still being alienated. Moreover, it is through this situated knowledge, that the farmers are being evicted. Again, institutional experts claim the position of being in charge of all knowledges while the rest are pushed into the role of receivers of knowledge (Turnhout 2018; Jasanoff 2010; Mehra 2009; Heiman 1996). While ample literature theorises how apolitical techno-scientific knowledge causes widespread dispossession (Resurrección and Elmhirst 2021; Jepson et al. 2017; Maria and Shiva 2014; Pálsson 1996), through this chapter I analyse the co-option of situated knowledge lead to the same unjust results.

While turning a blind eye to the socio-ecological degradation caused by a consumerist lifestyle as discussed above, now environmental imaginaries are shaped by using situated knowledges while simultaneously villanising and othering the people who have largely made use of this knowledge. While knowledges used are being diversified, the plans still are shaped by the very neoliberal systems that produced the problem. As a result, this bourgeois environmentalism cannot produce socio-ecological just outcomes as it inherently

runs on exclusionary economic priorities. In other words, the apolitical implementation of any and not just 'Western scientific' knowledge leads to reinforcing power imbalances and producing unjust geographies. Therefore, merely including situated knowledge within environmental plans fails to decrease socio-ecological dispossession. Rather, the need is to fundamentally restructure environmental governance while being mindful of the power dynamics discussed in the previous section.

The ontological and epistemological investigation reveals the limitations of institutional knowledges framed as superior, and monolithic by the state and the judiciary (Robbins 2019; Zhouri 2017; Peet 2011; Escobar 1998; O'Riordan 1981). This institutional process in turn frames the farmers as 'dim-witted' 'polluters'. Moreover, this pits the marginalised against nature along with pitting the marginalised against certain sections of society (Baviskar 2020; Ravindran 2000). In the chapter, it is seen that the farmers have been farming for generations using multiple knowledges including situated knowledges heavily influenced by globalised agendas such as the Green Revolution (Singh et al. 2021; Guha and Martínez-Alier 1997). While the farmers have been sharing the floodplains with the river without hampering the flow of the water and understanding the biophysical properties of the area, they also use chemical agents and sometimes polluted water in farming. These layered aspects have been analysed in a relative manner and as being situated within the global socio-political discourse. Through environmentalism of the dispossessed, their actions can be recognised as sitting outside neoliberal mass exploitation and hence providing a more just alternative (Anguelovski and Martínez-Alier 2014).

Therefore, the farmers need to be recognised as deeply knowledgeable about the environment and environmental governance. Documenting this is important as this multiplicity of knowledge is currently being erased through evictions. Such a pattern of multiple knowledges first being erased by neoliberal policies and then institutional experts becoming the custodians of knowledge prescribing epistemological normativity that further push to create neoliberal imaginaries is common (Zimmer 2017; Smith 2008). Through this process, the power to reorder and categorise human/nature relations rests with some (Turnhout 2018; Mol 2003). In India, similar patterns can be seen in the case studies of the Sabarmati Riverfront (Thakkar 2019; Pessina 2018) and the past Yamuna action Plans (Sharma and Kaur 2020; Nallathiga 2018).

The recognition of farmers as knowledgeable not only leads to socio-ecological betterment but also enhances the rejuvenated Yamuna plans and becomes a vital factor in their success or failure. While the long-term effects of the potential decrease in river pollution are yet to be seen, the immediate result of not including the farmers within the conceptualisation of the plans can already be seen in the failure of multiple plantation drives on the floodplains. Similar to past development plans, these rejuvenation plans replace the co-evolution of nature and society with the protection of nature alone (Claus et al. 2017). This divorces human and environmental rights, leading to unjust outcomes (Prabhakar and Gadgil 1996). Instead of ontologically separating nature/culture through the creation of the bio-diversity park from scratch through a trial-and-error method, reconceptualising nature and society as a web of interconnected and relative factors would strengthen sustainable development.

This chapter also analyses the nature of the environmental imaginary being created through the rejuvenated Yamuna initiative and how it relates to that of the farmers. Specifically, questions of what sort of imaginary is being created? Who is allowed to be a part of it? Why? What environmental imaginaries are contesting this? are explored. The Yamuna rejuvenated initiative is creating a specific environmental imaginary with no space for humans other than for recreational purposes and some construction elements. In other words, the 'urban environment' is now an investment produced for 'modern people' and taken away from 'underdeveloped people' (Nixon 2013). The multiplicity of the environment through the inclusion of recreation and construction limits itself to the demands of the upper-middle-class. The inclusion of farmers within this imaginary is framed as 'impossible' or 'unnecessary' at best and environmentally derogatory at worst.

By unpacking the nature of the environmental imaginaries of the farmers, a more socio-ecologically just imaginary is seen. Here, farmers are part of development, which is aesthetic, recreational, economic, cultural, healthy, secure, sustainable, and more just. The point is that this investigation, much like the investigation of the multiplicities of knowledge, reveals that the singularly framed conservational imaginary of the bio-diversity park by the institutional experts erases the ingrained violent socio-ecological dispossession. Again, a more diverse, and equitable environmental imaginary full of multiplicities is first removed from memory by neoliberal policies and then without mentioning this violence is projected as singular and superior for the betterment of all.

As this research took place during the socio-spatial transformation of the floodplains, unique environmental imaginaries could be analysed. A brief moment of interaction and coexistence of the nature of environmentalism of the bourgeois and the dispossessed was captured. Even though unofficial, a working system of space being allocated to the farmers within the bio-diversity park was seen. This moment was also full of multiple imaginaries held by the intersectional group of the farmers constituting various demands and being full of layered complexities. As a result, a more equitable coexistence could be analysed in a situated manner. Such an analysis through the environmentalism of the bourgeois and dispossessed also shows the limitations of these theories. This temporal coexistence too is full of uneven power dynamics. As a result, implementing multiplicities of knowledges and the presence of multiple environmental imaginaries in itself fails to reduce inequalities. It is important to recognise that these arrangements can also be taken advantage of by the powerful, further creating socio-ecological dispossession. Nonetheless, such an analysis does open up the possibility of more just multiple knowledges and imaginaries which is missing in the current institutional discourse through which widescale violent transformations are taking place.

### 8.1.3 Research question 3: How do the dispossessed negotiate, navigate, and compete under the rejuvenated Yamuna initiative?

After establishing the nature of the environmentalism of the farmers, chapter 7 analyses how the farmers negotiate, navigate, and compete for a space within the rejuvenated Yamuna initiative. It is important to emphasize here that the farmers do resist the rejuvenated Yamuna initiative. This is because previously, Baviskar (2020) while analysing the demolition of Yamuna Pushta and Follmann (2016, 2015, 2014) while analysing the construction of the Commonwealth Games Village marked the failure of the farmers in resisting the environmental degradation. This difference in empirical findings is due to the temporal and situated nature of ethnographic qualitative research (Boydell et al. 2016; Desai and Potter 2006). Like the findings of the previous research, even the empirical findings of this thesis are bound by similar restraints. Again, the findings of this thesis come from a unique position where I was able to capture the transition of small-scale farms to bio-diversity parks. However, despite these differences, Baviskar's (2020, 2019) bourgeois environmentalism theory and its refinement by Follmann (2016, 2015, 2014) still stay

important in analysing urban environmentalism pushed by the upper-middle-class and the ENGOs. This thesis further contributes to the theory by engaging with the environmentalism of the dispossessed to be able to better theorise the environmentalism of the farmers in the Yamuna floodplains.

One of the reasons for dismissing the farmers as not environmental is because their arguments are heavily laden with socio-economic concerns about livelihood and residence. Actions of other actors such as the creation of biodiversity parks by the state, the formation of environmental expert committees by the judiciary and the filling of PILs by the environmentalists are overtly 'green'. In other words, these actors perform their environmentality and fit within the normative environmental discourse that divorces environmental concerns with human rights issues. When assessed through this framework of bourgeois environmentalism, the environmentalism of the farmers is not recognised. However, through the environmentalism of the dispossessed theory, the critical environmentalism of the farmers is identified. They do not engage with a siloed view of nature but are able to tackle the larger socio-ecological degradation. This multi-dimensional view is reflected in their resistance (Martínez-Alier 2020; Martinez-Alier et al. 2016; Anguelovski and Martínez-Alier 2014; Linkenbach 2009; Guha and Martinez-Alier 1997).

Another reason for dismissing the farmers as not environmental is because due to institutional restrictions, their resistance is confined mostly to the housing rights channels of governance. The state and judicial institutions that concern themselves with nature such as *Namami Gange* and NIUA (2020), *Namami Gange* (2021) and the National Green Tribunal (2020, 2019, 2012) are designed with their singular biophysical understanding. While they do have some community elements, these are mostly captured by the elite through which elements of recreation (for some) and construction have been allowed, as discussed above. Without an interdisciplinary and intersectional element, they fail to recognise the farmers as environmental agents within a socio-political system driven by skewed power dynamics (Gill 2016; Follmann 2015). This produces segregated environmental solutions that lead to socio-ecological dispossession.

These socio-political barriers keep the farmers out of the environmental discourse. The only identity forced on them is that of 'polluters' and 'illegal occupants' (DDA 2020, NGT 2012) which they have to resist in the housing rights spaces. However, by dealing with

environmental issues in housing rights spaces, to an extent, they are able to join this fracture. As a result, they extend the singular rights of nature concerns to become more holistic by incorporating not only their rights but also concerns about citizenship and the changing nature/society relations (Claus et al. 2017; Nixon 2013; Soja 2010, Gardner and Lewis 1996; Castree and Braun 1998). As theorised by political ecology, they are able to highlight that environmental plans applied in an apolitical manner such as the rejuvenated Yamuna initiative are highly political. Moreover, they explicitly call attention to the socio-ecological dispossession caused by such an apolitical approach to environmental solutions. While this is a situated case study, threads of similar lived experiences globally have been theorised (Yaka 2020; Maria and Shiva 2014; Negi 2011).

This politicisation of environmental institutes is important as globally, due to dissatisfaction with the state, specialised environmental courts are 'exploding' (Pring and Pring 2016; Baxi 2002). Even the state is recognising the importance of participating in the environmental discourse as seen by the recent (Draft) Master Plan Delhi 2024 (DDA 2021) that marks environmental protection as one of its priorities. These steps show a serious institutional will to protect nature (Gill 2016). However, these apolitical spaces close most negotiations or discussions and instead act in an authoritarian manner (Baviskar 2020; Pessina 2018; Follmann 2016; Karpouzoglou and Zimmer 2016; McFarlane 2008). As a result, 'green' becomes an almost sacred word which cannot be questioned.

In such limitations within environmental governance, the farmers not only navigate through official and non-official spaces but also, to a certain extent, stretch them to create new more equitable avenues. As recognised through environmentalism of the dispossessed theory, by filling PILs, fighting court cases, advocating through official and unofficial means in governmental departments, generational usage of land in a largely sustainable manner, blocking mass concretisation of the floodplains, protesting, and approaching media, they attempt to make this authoritarian governance more just. The success of these actions can be seen by judicial judgements granting them the right to the city, farming being officially allowed in the floodplains, and at least some *Dilliwalle* being aware of the deep seeded socio-ecological issues through newspaper articles and taking part in Yamuna floodplain walks. Overall, the resistance of the farmers does not stay limited to just the environmental issues but starts a larger socio-ecological conversation. Recognising these contributions can

potentially bridge the gap between resistance by farmers and mainstream environmentalists answering the call of forming a red-green resistance (Rengarajan et al. 2018; Bakker 2014; Vallejo and Gloppen 2013; Smith 2005).

Another actor that resists this socio-ecological dispossession is recognised as the river itself. A recent example of this is the environmentally degrading construction work on the floodplains stopping and multiple state-led plantation drives failing due to the increase of the river waters during monsoon. This also reveals the limitations in the knowledge of the institutional experts and highlights the situated expertise of the farmers who have been successfully farming in the area for generations, as discussed in the above section. Viewing nature as an actor steps away from human-centric governance to focus on the more-than-human (Davis et al. 2019; Gill 2016; Furman and Gruenewald 2004). However, it is important to notice that this decentring by the farmers is vastly different from that of the judiciary and the state. This apolitical decentring by actors such as the judiciary and the state has resulted in the inequitable Yamuna rejuvenation initiative. As discussed, this again produces nature/society division. Here, again a hierarchical order is established with skewed power dynamics where nature gets a place above certain humans. Instead, within the environmentalism of the farmers while the non-human is recognised as an actor, shifting away from human-centric discourse, the socio-ecological waterscape within which all actors sit relatively is identified. This offers a more equitable approach to decentring the human-centric approach by breaking the hierarchical order and shifting the conversation to negotiating power differences better and coevolving.

## 8.2 Future Research

This research extends the environmental theoretical framework by analysing the environmentalisms of small-scale farmers in the megacity of Delhi. To gain a more holistic understanding of socio-ecological transformations, environmentalisms, and inequitable environmental plans, future research can further diversify the focus and investigate the multiplicity of environmentalisms by multiple environmental actors at various spatial-temporal scales and levels. Examples of such exploration are Jain (2018) who analyses the socio-political impact on *pandits* (priests) in North Delhi घाट (religious bathing areas) and

Alley (2019, 1994) who investigates the religious perceptions of Hindus in Banaras due to the clean river initiatives.

This research could not be participatory partly due to the pandemic lockdowns and partly due to the rigid structure of a PhD that does not allow the affected communities to actively shape the research right from selecting the research topic, forming the research questions, and producing outputs in regional languages to conducting the fieldwork, writing up, publishing and directly utilising the work to resist socio-ecological dispossession (MacDonald 2012; Riet 2008; Wilmsen 2008; Desai and Potter 2006; Sutton and Kemp 2006). While the research questions answered in the thesis have been shaped by inputs from the farmers, I have incorporated quotes and phrases in Hindi, and I have tried to play a small role in the resistance by providing information in official documents and writing proposals, future research can more actively incorporate participatory elements. Some of these participatory aspects are already being incorporated by me in the Early Career Researchers Book (forthcoming) through the Water Hub mentioned in Chapter 1, titled 'Pushing the paradigm of global water security: Transnational perspectives for the next generations'. I contribute an audio/video multimedia output in the voices of the farmers in the Hindi language.

The framework of political ecology and the theories of bourgeois environmentalism and the environmentalism of the dispossessed have been sufficient in answering the three research questions in this thesis. However, this analysis can be made richer and deeper by being shaped by other approaches such as feminist (Maria and Shiva 2014; Agarwal 1995) decolonial (Ulloa 2017; Haraway 2016), queer (Tzaninis et al. 2021; Goldfischer et al. 2020; Alaimo 2010; Castree and Braun 1998), *Dalit* (caste) (Sankar and Suresh 2023; Kumar 2016; Mehta 2011) and socio-ecological justice (Yaka 2020; Furman and Gruenewald 2004) to name a few.

This qualitative research is able to theorise the phenomena of environmentalism of the farmers. However, many material questions such as quantifying various aspects of interrelated health of the groundwater, vegetables and the *Dilliwale* remain. Chapter 6 discussed the contested CPCB report (2019) results. Mixed method or quantitative research would be able to produce relevant results that can be triangulated (Ching and Mukherjee 2015; Desai and Potter 2006; Lewis-Beck et al. 2004). Examples of research already being done along these lines are the *Main bhi Dilli* (I am also Delhi) (2020) report and the PhD

thesis of Jemma Philips (forthcoming), sitting at the School of Civil Engineering, University of Leeds about faecal pathogens in the urban environment.

## 8.3 Final Remarks

This thesis analyses the transforming waterscapes through the political ecology framework in Delhi. I caught the research area at a time when small-scale farms still featured in the area more prominently. As a result, I was able to theorise the multiplicity of environmentalisms present in Delhi. This waterscape has already transformed vastly even more in early 2023 when evictions erased the multiple knowledges and imaginaries present. The area is now empty of the many farms and the buffaloes pictured in chapters 1 and 5. The elite leisurely walking on the bridges as shown in chapter 6 will soon claim the 'sanitised' research area after the bio-diversity parks are built. No improvement is yet seen in the Yamuna River due to these drastic measures. The answer to the question raised by tenant farmer (7) mentioned in chapter 7, "अगर हम हटा दिए जाएं तो क्या यमुना साफ हो जाएगी? (If we are removed will the Yamuna be rejuvenated?)" seems to be a loud no. Still hope resides in the ongoing official and unofficial resistance of the farmers to be allowed to conduct farming in the floodplains as mentioned within the (Draft) Master Plan Delhi 2024 (DDA 2021).

A reviewer commented on fieldwork notes submission based on a section of the thesis that the argument that the knowledge of/on the environment must take into account an inclusive range of stakeholders is not very original. However, the originality of the thesis lies in taking further this argument and exploring the nuances of power in environmentally sustainable alternatives. This political ecology analysis of making urban farmers visible is analytical and applied.

## Appendix 1: List of participants

| S.no | Actor group | Code used | Details |
|---|---|---|---|
| 1. | Tenant farmers | Tenant farmer (1), (2) | (M), (F) Hindu farmers from Bihar |
| | | Tenant farmer (3) | (F) Hindu farmer from Bihar |
| | | Tenant farmer (4) | (M) Farmer/fisherman from Uttar Pradesh |
| | | Tenant farmer (5) | (M) Muslim boatman from Bihar |
| | | Tenant farmer (6), (7) | (Fs) Hindu farmers from Delhi |
| | | Tenant farmer (8), (9) | (Ms) Lower-caste Hindu farmers from Bihar |
| | | Tenant farmer (10) | (M) Farmer from Bihar |
| | | Tenant farmer (11), (12) | (Fs) Muslim farmers from Uttar Pradesh |
| | | Tenant farmer (13) | (M) Cattle herder from Delhi |
| 2. | Land-claiming Farmers | Land-claiming Farmers (1), (2) | (F) *Jaat* farmers |
| | | Land-claiming Farmers (3), (4), (5) | (Ms) *Pandit* farmers |
| | | Land-claiming Farmers (6), (7) | (F) (M) *Gujjar* farmers |
| | | Land-claiming Farmers (8), (9), (10), (11) | (Ms) *Gujjar* fishermen |
| | | Land-claiming Farmers (12) | (M) *Jaat* farmer |

| | | | |
|---|---|---|---|
| 3. | Upper-middle-class *Dilliwale* | Upper-middle-class *Dilliwala* | (M), Hindu, Engineer |
| | | (1)<br>Middle -class *Dilliwala* (2) | (M) Muslim, IT professional<br>(F) Lower caste Hindu, Data analyst |
| | | Middle -class *Dilliwala* (3) | (M), Muslim, chief<br>(F), Social media manager |
| | | Middle -class *Dilliwala* (4) | (F) Christian, Musician |
| | | Upper-middle-class *Dilliwala* | |
| | | (5)<br>Middle -class *Dilliwala* (6) | |
| 4. | Lower-class *Dilliwale* | Lower-class *Dilliwala* (1) | (F) Hindu |
| | | Lower-class *Dilliwala* (1) | (M) Muslim |
| 5. | Environmentalists | Environmentalist (1) | South Asia Network on Dams, Rivers and People ENGO (SANDRP) |
| | | Environmentalist (2) | |
| | | Environmentalist (3) | |
| | | Environmentalist (4) | |
| | | Environmentalist (5) | Manthan ENGO |
| | | Environmentalist (6) | Swechha ENGO |
| | | Environmentalist (7) | |

| | | | |
|---|---|---|---|
| | | | Centre for Science and Environment ENGO |
| 6. | Housing rights activists | Housing rights activist (1) | Also, a tenant farmer |
| | | Housing rights activist (2) | Youth for Unity and Voluntary Action (YUVA) |
| | | Housing rights activist (3) | |
| 7. | Environmental Lawyers | Environmental Lawyer (1) | |
| | | Environmental Lawyer (2) | Legal Help Line India |
| | | Judicial Environmental Expert | Senior academic |
| 8. | Housing rights lawyers | Housing rights lawyer (1) | |
| | | Housing rights lawyer (2), (3) | Human Rights Law Network NGO |
| | | Housing rights lawyer (4) | Nazdeek NGO |
| | | Housing rights lawyer (5) | Human Rights Law Network NGO |
| 9. | State employees | Delhi Development Authority officer (1) | Landscape and Environmental Planning Department |
| | | Delhi Development Authority employees (2), (3) | Landscape and Environmental Planning Department |
| | | Delhi Jal (water) Board officer | |
| | | Ministry of Jal Shakti officer (Central Ground Water Board) | Retired officer |

| | | | |
|---|---|---|---|
| | | Indian National Trust for Art and Cultural Heritage senior officer (INTACH)<br>Department of Animal Husbandry, Dairying and Fisheries officer | |

Table 3. Full list of participants.

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