

# Decolonial Subversions

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Uncovering the silences:  
Environmental knowledges in  
the floodplains of Yamuna,  
Delhi

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# Uncovering the silences: Environmental knowledges in the floodplains of Yamuna, Delhi

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## Abstract

Actions to control nature and people often involve the centralisation of knowledge and erasure of different and opposing views. This way, a singular ordered and homogenous nature takes the place of a highly complex and multidimensional one, hiding all historical, cultural, and regional issues. As a result, the understanding of nature needs to break the silo of the environmental and be understood as a complex assemblage of emotions, worldviews, knowledges, practices, and processes. Ethnography then becomes epistemologically important to the investigation of crucial aspects of the continuous reproduction of ecologies. Here the situated local actors are viewed as knowledgeable; not limiting the focus to a single dimension makes the ontology rich and complex. These field notes represent a qualitative methodology, making use of methods such as semi-structured conversations and exploring different landscapes with the actors. I examine how a government employee and a land-claiming farmer describe their surroundings and their role while situating themselves within the larger socio-political structures. Using field notes makes it possible to share a microscopic view of the larger picture. The intention is not to romanticise the knowledges of farmers as a key to bringing equitable outcomes; rather, the intention is to untangle the complex socio-ecological reality of the Yamuna floodplains in Delhi.

**Keywords:** Ethnography, multiple knowledges, small-scale farming, river rejuvenation, eviction, biodiversity parks

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## Introduction

Environmentalism, development, and urbanisation are all social processes. Cultural constructions of the environment of various actors remain inaccessible unless we listen (Basso 1996). Through naming, classifying, and telling stories about the Yamuna and its floodplains in Delhi, people temporarily make accessible how they occupy the landscape, how they deal with other actors, and how they see themselves in a relative manner.

The appreciation of other people's understanding is conveyed here by drawing on two ethnographic interactions – one with a government employee and the other with a land-claiming farmer<sup>2</sup> – in the form of field notes. Both interactions happened in September 2021 in the Hindi language. These conversations reflect repeated observations, conversations, and patterns that emerged throughout the fieldwork. Data from relevant field notes of direct conversation, personal observations, official documents, and academic journals are triangulated. Field notes are the textually fragmented 'close to experience' documentation of intensive interaction with the interviewees (Gupta & Ferguson 1997: 12), which took place by walking, showing, talking, and experiencing the landscape. Here the rich interactional data is emphasised through the use of qualitative description in an attempt to stay 'closer' to the original data (Sandelowski 2000).

The data have been grounded in a political ecology framework and analysed through the concept of the politics of knowledge, which links larger structural conditions with situated interactions (Strauss 2003). Socio-ecological changes, while generally framed as apolitical, are not neutral (Robbins 2019). Political ecology states that the environment is produced by social power relations, and that they co-determine each other (Swyngedouw 2004, Heynen et al. 2006). Thus, people and materials are mutually involved in the ecosystem, becoming 'enmeshed' (Ingold 1992). Political ecology breaks the binaries of society and nature, brings them together into a hybrid, and views them through power relations (Zimmer et al. 2020: 227).

The knowledge forming this politicised nature is shaped through culturally coded ideas that are embedded in power and authority, which involve multiple claims, identities, relations, choices, values, and emotions (Sultana 2015: 636). The question of whose knowledge is recognised, considered worthy, circulated, transformed, and transmitted is a political matter of everyday negotiations and discussions (Gururani 2002). Despite this, it is claimed that a linear model of 'neutral' and 'rational' science is used for decision-making (Turnhout 2018: 366). This way, pre-established 'experts' take the dominant position and come to be in charge of all knowledge, while others are forced into the limited position of being receivers of knowledge. This creates a monolithic, centralised, and hierarchical epistemic model of expertise and, moreover, deliberately detaches expertise from socio-economic dynamics (Jasanoff 2010); as a result, the vast political implications, power dynamics, and violations of rights are successfully masked.

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<sup>2</sup> Both people have been anonymised as court cases relating to this matter are still ongoing.

## The floodplains of the Yamuna River, Delhi

The Yamuna River in Delhi is both the prime water source for the city and the most polluted river stretch in India, contaminated with heavy metals such as chromium, nickel, copper, zinc, lead, cadmium, and arsenic (Yamuna Monitoring Committee 2020). The 22km stretch of the Yamuna River passing through Delhi constitutes 2 per cent of the total river length and accounts for 76 per cent of the total pollution it carries (Said & Hussain 2019: 2).

Multiple actors are involved in the governance structure of the floodplains in Delhi. While the central government works through many departments, the Delhi Development Authority (DDA)<sup>3</sup> can be considered one of the main bodies as most of the land is under its administration (DDA 2019). The National Green Tribunal (NGT)<sup>4</sup> is a judicial body set up to deal with environmental cases. Due to the intervention of the NGT, the floodplains around Delhi are now being rejuvenated, as opposed to former plans that would have seen them 'developed' under the DDA through multiple concrete structures. This concept of rejuvenation is being hailed as an ideal model in terms of ecology, to be a prototype for the remaining 351 polluted river stretches in the country (YMC 2020). Under the Restoration and Rejuvenation of the Flood Plains of Delhi programme (DDA 2021), biodiversity parks and artificial wetlands are being created on the floodplains. However, this is achieved through the continuous eviction of farmers by accusing them of pollution due to their use of chemical agents such as fertilisers.<sup>5</sup> Thus far, 1,152 acres of land have been cleared through farmer evictions by the DDA and there are plans to clear a further 105 acres (YMC 2020).

<sup>3</sup> Established in 1957, the DDA is a central government body dedicated to the planning and development of Delhi.

<sup>4</sup> The National Green Tribunal (NGT) was established in 2010 as a dedicated environmental court in India through the National Green Tribunal Act 2010.

<sup>5</sup> Prasad, Malvika, 2023. 'Vacate Yamuna floodplains within 3 days, Delhi HC tells occupants at Bela Estate'. *Indian Express*, March 16, 2023. <https://indianexpress.com/article/cities/delhi/vacate-yamuna-floodplains-within-3-days-delhi-hc-occupants-bela-estate-8498851>; *Hindustan Times*, 2023. 'Vacate in 3 days or face demolition: Delhi HC to residents of Yamuna floodplains'. March 15, 2023. <https://www.hindustantimes.com/cities/delhi-news/vacate-in-3-days-or-face-demolition-delhi-hc-to-residents-of-yamuna-floodplains-101678900319362.html>

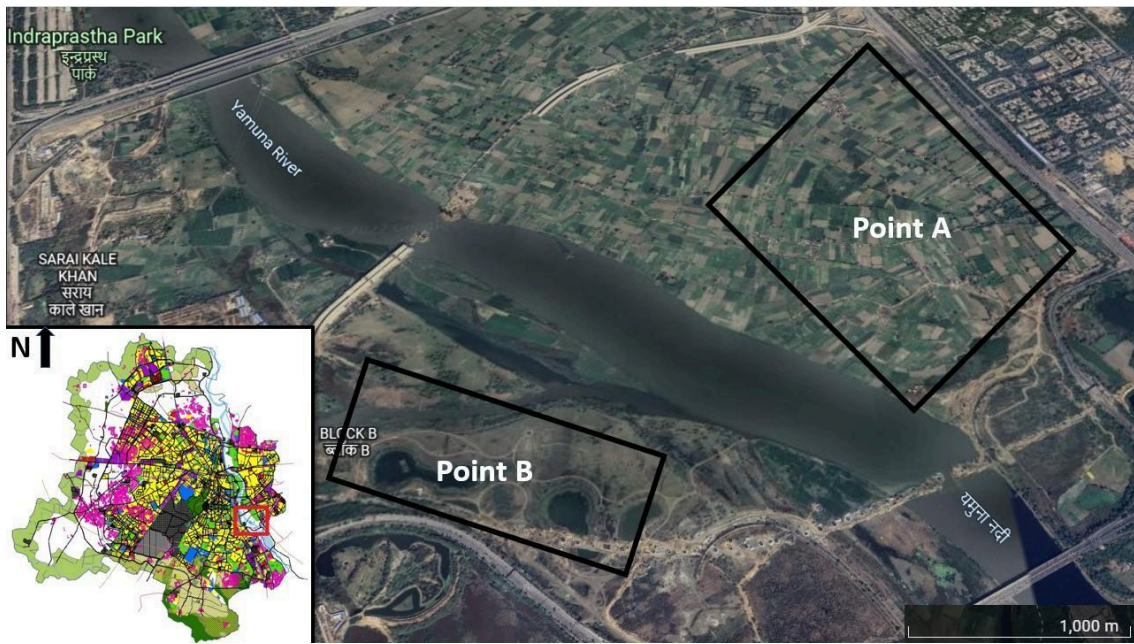


Fig. 1. Part of Yamuna *khadar* area in Delhi. Point A shows the area where farming is still being practiced. Point B shows the area where the South Delhi Yamuna Biodiversity Park is being constructed. Figure credit: Author.

## Farming in Chilla *Khadar*



Fig. 2. Fields in the Chilla *khadar* floodplains, Point A in Fig. 1. Picture credit: Author, September 2021.

The Yamuna floodplain area, being fertile, accounts for a vast chunk of the agrarian economic contribution of the country. Farming on the floodplains of Delhi goes back to when the city was first established due to the availability of alluvial soil and water (Singh et al. 2010: 611). The Chilla *khadar*<sup>6</sup> (floodplains) area (Point A, Fig. 1) is full of farming activities. Farmers are as heterogeneous and multi-scaled as are any other group, having various generational, personal, gendered, classist, and casteist differences in values, beliefs, and behaviours to name just a few. In general, there are two main kinds of farmers on the floodplains: those who have been in Delhi since before Independence (1947), and those who migrated to Delhi more recently. For clarity, the farmers having a claim on land<sup>7</sup> will be referred to as land-claiming farmers, while the farmers who lease the land annually (called *patta*)<sup>8</sup> will be termed tenant farmers. While the Green Revolution was a breakthrough that brought a significant increase in produce, it did not change the land ownership patterns, which followed lines of caste and class. This is one of the reasons for the continued systematic social hegemony of land-claiming farmers (Sharma 1972). While earlier they lived in *khadar*, the surrounding areas, such as Mayur Vihar and Phadgunj,<sup>9</sup> were built in the late 1970s and these farmers were among the first to settle there. The tenant farmers, on the other hand, migrated to Delhi during the same time period and became the new residents of *khadar*. Both groups of farmers have shown a pattern of adapting to various socio-political contexts while maintaining their physical connections to their occupations and surroundings to various extents.

Power operates in nuanced ways. Individuals have multiple, overlapping social identities at various scales (Chung & Milkoreit 2021: 4). Not all farmers are economically weak; some are well connected with ample land, property, and monetary assets. Through generations of ties, connections, and wealth, the land-claiming farmers have moved up on the economic scale; tenant farmers, however, remain stuck in debt and have experienced only marginal improvement. Yet currently, all farmers are being dispossessed.

However, this does not unite them. Negotiations with various actors such as the state and the judiciary by land-leasing and tenant farmers remain separate. In political negotiations, the tenant farmers are not even acknowledged, let alone given a seat at the table by the land-claiming farmers. This is because the land-claiming farmers have a vested interest in maintaining land holdings (Sharma 1972) and fear demands for better renting deals and higher wages from the tenant farmers. Regular threats often lead to violent acts. However, as the land-claiming farmers require the tenant farmers to lease out the land, they demand that their number be limited and that they not all be evicted.

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<sup>6</sup> '*Khadar*' means 'floodplains' in Hindi, Urdu, and Punjabi languages.

<sup>7</sup> Records of how much land is claimed by these farmers in official documents, court cases, and interviews are conflicting. Conversations with farmers in *khadar* estimated claims to have been made on land sizes anywhere between 25 *bighas* and 500 *bighas* (a scale of measurement used by the farmers in *khadar*. 1 *bigha* = around one third of an acre).

<sup>8</sup> A family of around 5 members leases out around 2–10 *bighas* of land.

<sup>9</sup> These areas were part of the floodplains, cultivated by large-scale farmers. However, they were elevated, concreted over, and made available for housing by the state.

It emerges that claims made by the dispossessed cannot all be considered to be equivalent, given that they are embedded within different environmental knowledges; therefore, it is paramount that they be understood within these factors. The reason for sharing an account of a land-claiming farmer is to show the nuances of the complex socio-political systems within *khadar* and to break away from simplified binary perceptions of oppressed/oppressor, weak/powerful, and dominance/resistance. This presents a more nuanced understanding of the environmental politics of knowledge in *khadar*.

## Land-claiming farmer in Chilla *khadar*

After Independence (1947), the Nehru administration invited farmers to grow vegetables in the floodplains, among other locations, to contribute to making India self-sufficient. For this purpose, the farmers were officially given leases for 90 years. A Delhi Peasants' Cooperative Multipurpose Society was formed by the land-claiming farmers to deal with the administrative processes and manage the leases. However, after the Delhi Development Authority (DDA) was formed, due to disagreement between the new Authority and the Cooperative, the leases officially lapsed. Nevertheless, the farmers continued paying their annual rent and collecting receipts from the Cooperative. Now, the DDA considers the land to be government land and the farmers as illegal encroachers (Lal & Pradhan 2019). Currently, fruits, vegetables, and flowers are grown here and sold throughout Delhi.

Below is an extract from the field notes (edited) of my interaction with a land-claiming farmer.

I entered the Chilla *khadar* area, exploring a different route than my regular visits. A smallshop owner, conducting business on a रेडी ('cart') pointed me to the land-claiming farmer's land to talk about the river and the floodplains. Taking just a few steps in, I saw the farm. Like other farms operated by land-claiming farmers, this one had a cow shed in the front and crops at the back. This one also had a small temple structure under a huge banyan tree made of a tiny चबूतरा ('platform') and a small idol. A woman with a kid was praying in the temple. I found out that the temple was simply called पुराना मंदिर (lit. 'old temple'), as opposed to a bigger new temple constructed a few feet away. In front of the temple stood a motorbike with a sticker saying 'Pandit' ('priest'), written in bold white letters above the licence plate.

Below are some of the experiences, opinions, and life stories that the land-claiming farmer (LCF) shared with me.

LCF: "I started farming in 1968 taking over from my father. He passed away when I was still in college. I had to leave my degree to start earning. Until then I was not much interested in farming. I had not decided what, but I wanted to do something else after the degree. But after my father's death, I took over the farms. That is when I found out that the paperwork was not really complete. My father was paying the लगान ('taxes') and thought that it would be enough. Back then he did not realise the

value of making a proper deal with the government. Now I am used to the fresh air, food etc and can't live without it. I have a house in Chilla village (an urban village in Mayur Vihar), but I come here every day to sit in the open and take care of the cows and the farm. This is a place where anyone can bring an injured cow and we will nurse it back to health."<sup>10</sup>

**Q:** The Yamuna is now being cleaned, right?

**LCF:** "The government does not really want to clean the Yamuna. If it did, then it would have stopped the big polluters. Not us. We do use fertilisers but the seeds we get in the market don't grow without using fertilisers.<sup>11</sup> First, they start selling these seeds and give us subsidies on fertiliser and then they ask why are we using it? They make it, they sell it. Even though we use fertilisers, it doesn't pollute the river too much."

**Q:** The Delhi Development Authority (DDA) plans to create parks here to rejuvenate the floodplains.

**LCF:** "DDA does not care about floodplains. It was all floodplains earlier. They have been the ones cutting the area down. The area had so many trees. They are the ones who cut them down and built roads and buildings. Now they are saying that we are the ones polluting the river."

**Q:** Now they are going to plant trees in the new biodiversity park.

**LCF:** "They are putting new grass. When it rains in parks, the water stays for a while, even though it's a park. However, in the floodplains, the water goes in quickly. These parks are built on private contract.<sup>12</sup> The DDA will plant grass, saplings etc. They will have to replant everything after the monsoon.<sup>13</sup> So, it's a way of earning money. Nobody is more corrupt than the DDA. They will not be able to maintain the park. We have grown every tree here ourselves. They grow plants and they all die.<sup>14</sup> That's because they don't care. Their job is to plant so they plant.

<sup>10</sup> He was taking care of the cows due to his caste identity. Brahmins are considered to be the highest caste and cows are sacred.

<sup>11</sup> The socio-ecological degradation due to the Green Revolution is well documented (Mies & Shiva 2014, Kapoor 2014, Das 2011, Nadkarni 2000, Gupta 1995, Agarwal 1992). High Yielding Variety (HYV) seeds are used which rely on the heavy input of chemical fertilisers and pesticides. Without seed-saving practices, farmers are dependent on knowledge based on the US model of agrarian modernisation (Ajl & Sharma 2022). This generates a barrier to applying multiple visions of agrarian knowledges and, ultimately, causes the erasure of local knowledges.

<sup>12</sup> Through public-private partnership (PPP), big builders and developers are able to secure large contracts from public agencies without public consultation (Maitra 2011: 114). The capital requirements stipulated in the eligibility criteria exclude most people that have historically used the resources. The strong nexus between politicians and contractors leads to deep-seated corruption involving peddling activities, patronage, cronyism, and financial embezzlement in approving projects (Baviskar 2020, Nagarwal & Kumar 2016).

<sup>13</sup> Like the water cycle, even the monsoon-fed rivers have a year-round cycle. In the monsoon, the river expands and fills up the floodplains for a few months. The river then contracts for the rest of the year. So, anything built on the floodplains will have to be rebuilt each time after the water contracts following its natural cycle.

<sup>14</sup> Projects such as the development of plant nurseries and compensatory afforestation on the floodplains have failed completely due to the DDA's lack of familiarity with the floodplains (Sharma 2020).



That's it. No one takes care of the tree. It takes 5–6 years for the tree to take strong roots. Till that you have to take care. Will they do it? They don't even know how to do it. If they invest a lot then to save their investment, they might lift the floodplains and create barrages to save it from the river water coming in during the monsoon. However, we work with the river. We want the water to come. We understand that it is good for the soil as it brings in minerals and the groundwater recharges."

**Q:** Do you think that the middle-class people will come here after the park is made?

**LCF:** "People (middle-class) already come to the area to exercise and walk. However, the DDA is not earning from it. The biodiversity park is free for the public. But they earn by giving out contracts."

## Government employee in South Delhi Yamuna Biodiversity Park



Fig. 3. South Delhi Yamuna Biodiversity Park, Point B in Fig. 2. Picture credit: Author, September 2021.

Within the Restoration and Rejuvenation of the Flood Plains of Delhi (DDA 2021) plan, the floodplains are divided into 10 sections. One of these sections, called the South Delhi Yamuna Biodiversity Park (Point B, Fig. 1), is spread over 200 hectares (YMC 2020). Below is an extract from the field notes (edited) of my visit there.

I met the Delhi Development Authority (DDA) employee outside the gate of the biodiversity park. I had followed his directions to the area. The location was described as ‘next to Sundial’. This sundial was an aesthetic feature to ‘upgrade’ the area by evicting *jhuggies* (‘shanties’) before the Commonwealth Games.<sup>15</sup> He proudly gave me a tour, pointing to the progress made so far. The park was not yet officially open to the public, but many middle-class people could be seen taking a walk on the red stone walkway. Everything was built according to the National Green Tribunal (NGT) guidelines. There was no lighting, no washrooms, and no permanent structures. However, they were trying to get approval for bamboo hut structures to provide seating areas.

They had constructed multiple ponds where birds were flying. The pond was engineered to treat the water through natural processes. This was then used to water the entire area.

**Q:** Was it difficult creating this biodiversity park?

DDA Employee: “The NGT helped with technical expertise. We didn’t know what to do, which plants to grow. Now a trial-and-error method is being applied. The local plants that were already there have been removed as they used a lot of water. Now we’re planting saplings that take less water. Few plants survived in 4 feet of water during the monsoon. Now we know what to plant and will use this knowledge to carry out plantations in the rest of the park. The plants come from private contractors. This year they will check if the walkway survives the monsoon.”

**Q:** There were farmers here before this, right?

DDA Employee: “They were encroachers, living on the floodplains illegally and trying to muscle out as much money from the government as they could. Moreover, they were exploiting migrants by renting out disputed land. When people come from outside, they don’t know whose land it is. We keep telling these migrants not to give money to these encroachers.”

**Q:** But what has happened to them now?

DDA Employee: “What do you have to do? Concentrate on the river and forget about the farmers as they had nothing to do with the river.”

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<sup>15</sup> The Commonwealth Games held in 2010 were supposed to be a sign of modernity, giving India a favourable international identity.

## Competing knowledges

The two accounts show the complex and nuanced environmental knowledges of the farmer and the DDA employee. Both institutionalised and non-institutionalised knowledges are cultural, social, and political; the boundaries between them are porous. Situated knowledges are often seen as the domain of local actors, but here the state takes their ownership exclusively. This example shows how the more that situated knowledge is used, the more the farmers are alienated, therefore, the use of non-institutionalised knowledge does not necessarily signify engagement with the non-institutional actor.

Hegemonic discourses render experiences within groups invisible, as a singular lens ignores multiple interconnected factors (Nash 2008). The power dynamics between the government employee criminalising all farmers, and the land-claiming farmer emphasising his Brahmin identity and othering the tenant farmers, reveal the social hierarchy in the floodplains. Exclusion is used to establish and maintain political power, and physical and psychological security (Samhat 2000: 602). Therefore, it is necessary to not romanticise 'bottom-up' partnerships and claim that they would definitely result in equitable outcomes. My intention here is to untangle competing claims by analysing how the floodplains are perceived by various actors through a political ecology framework.

During my visit, the government employee described plantations on the floodplains as a one-of-a-kind pioneer effort. The 'wild' and 'untouched' landscape is slowly conquered by a situated learning using a trial-and-error method. The river swelling in the monsoon is seen as a nuisance, a force that destroys and uproots, something to fear. The floodplains are apologetically described as lacking basic needs such as electricity, toilets, and seating areas due to tight surveillance by the NGT. This sympathy is reserved only for the middle class for the duration of their short visit and is not extended to the farmers who live there. The changes on the floodplain are described in terms of aesthetics, development, and advancement.

On the other hand, the land-claiming farmer, despite being regarded by the DDA employee as an illegal encroacher, shows a ready familiarity with the landscape by describing the ecological cycle of the river, its benefits, and the growth of the vegetation. The river is described as nourishing and fulfilling, something to respect, coexist with, and make way for.<sup>16</sup> The floodplains are described as wholesome, open spaces in which 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 & Stokke 2000: 259): it is about identity, livelihood, development, aesthetics, values, ecology, and much more.

Ingold (2003) describes knowledge as a process of skilling oneself through practical engagement. Practical engagement is used by both the DDA employee and the

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<sup>16</sup> While land-claiming farmers do not live in the floodplains and hence do not have to move during the monsoon, tenant farmers do. This again shows the varying risk factors among the farmers.

land-claiming farmer for skilling themselves. The difference is that in making and implementing policies and plans, only the knowledge of the state is legitimised as institutional and valuable, fitting in with pre-existing modes of enquiry set in place by pre-established actors. When non-formally qualified farmers attempt to participate in decision-making, they are seen by policymakers and judges as uneducated and unknowledgeable, meaning that knowledge and the power to be seen and heard are centralised. This unequally empowers a single vision of environmental knowledge and nature, rendering it dominant (Negi 2011). In the end, the farmers are not even considered real political entities having a stake in the issue.

## Conclusion

Environmental degradation remains one of the most pressing issues worldwide. As a result, while being critical, there is an urgent need to inclusively expand environmental knowledges. Various people occupy the same space while using and understanding it differently (Zimmer 2015: 594), but by being blind to this multiplicity, many forms of knowledge are inherently erased.

A hybrid of institutionalised and non-institutionalised knowledge can create broad solutions to local resource management. Accounting for the knowledge of local actors situated in an area renders the process of defining the problem more flexible, incorporating multiple solutions and causes. For this, a more heterogeneous epistemic model is needed (Beck 2010: 305), in which environmentalism needs to be seen as a relational and situated cultural practice. A holistic response will mean the inclusion of various socio-economic, political, cultural, and environmental aspects. Consideration of multiple types of knowledge and actors would allow for the exploration of non-institutionalised frameworks and for the evaluation of the role both dominant and marginalised actions play in reducing environmental failure and mitigating ecological crisis.

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