

Periurban Spaces as Transitional Places: A Situated Urban Political Ecology Approach to Examine the Conflict on Municipal Solid Waste at Vilappilsala, Kerala

**A thesis submitted during 2024 to the University of Hyderabad in partial fulfilment of the
award of Ph.D. degree in Regional Studies**

By

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CERTIFICATE

This is to certify that the thesis entitled, **“Periurban Spaces as Transitional Places: A Situated Urban Political Ecology Approach to Examine the Conflict on Municipal Solid Waste at Vilappilsala, Kerala”** submitted by **Ashish Vinayak Prabhakar** bearing **Reg. No. 17SRPH02** in partial fulfilment of the requirements for award of **Doctor of Philosophy** in **Regional Studies** is a bonafide work carried out by him under my supervision and guidance.

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1. Prabhakar,A.V.(2023), “‘Out of Sight, Out of Mind’: Periurban Narratives of Waste and Resistance in Vilappilsala, Kerala”, *Urban India*. Vol.43(2). pp.37-52,(ISSN Number 0970-9045).Chapter of dissertation where this publication appears: Chapters 4 and 5.

And

Has made presentations in the following conferences:

1. Presented a paper titled: “Conflicts among LSGIs and the peculiar case of Vilappilsala: Democracy in action”, International Conference ‘In and Beyond the City: Emerging Ontologies, Persistent Challenges and Hopeful Futures’ organised by RC21, International Sociological Association, 18-21 September 2019.(International)
2. Presented a paper titled: “The Air Pollution Conundrum in Delhi: Towards a Regional Approach”, XIV International Conference on Public Policy and Management organised by Centre for Public Policy-IIM Bangalore, 22-24 August 2019. (International)

Further, the student has passed the following courses towards fulfilment of coursework requirement for Ph.D.:

Course Code	Name	Credits	Pass/Fail
RS801	Research Methodology	4	PASS
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DECLARATION

I, **Ashish Vinayak Prabhakar** hereby declare that this thesis entitled, **“Periurban Spaces as Transitional Places: A Situated Urban Political Ecology Approach to Examine the Conflict on Municipal Solid Waste at Vilappilsala, Kerala”** submitted by me under the guidance and supervision of Dr. Arvind. S. Susarla is a bonafide research work. I also declare that it has not been submitted previously in part or in full to this University or any other University or Institution for the award of any degree or diploma. A report on plagiarism statistics from the University Librarian is enclosed.

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ACKNOWLEDGMENTS

They say it takes a village to raise a child, this thesis is by all sense of the term , my first born. No amount of gratitude and acknowledgement will suffice for all those people who have helped me in writing this thesis and carrying out my research. Nevertheless, I shall try my best to express my gratitude.

First and foremost, I would like to thank my research supervisor Dr. Arvind S Susarla for his patience with my many blunders and stumbles and for his perseverance in partnering this project with me. Gratitude is also owed to the members of the Doctoral Research Committee, Dr. N. Purendra Prasad and Dr. Shaji Sivadasan. This project would not have been possible without their insightful observations, incisive questions, and abundant encouragement.

Secondly, I would like to thank, the Head of the Centre Dr. V. Srinivasa Rao for guiding me in several crucial situations. I also thank the faculty Dr. Sheela Prasad and Dr. Salah Punathil who along with my peers at the Centre for Regional Studies(CRS) extended their unending support. I am deeply indebted to the CRS for organising the Weekly Work in Progress (WIP) Seminars, which have been instrumental in shaping the questions I have asked and the resulting observations my fieldwork has yielded. Thanks, are also owed to the office staff of the CRS for helping official matters move along smoothly and on time.

Thirdly, I am of course, indebted to my respondents who so graciously gave me their time and painstakingly recounted their stories: you are the backbone of this thesis. In the course of my research journey, I have had the honour of meeting some of the most courageous and resolute individuals: I am in forever awe of your courage and perseverance.

Thanks, are also due to my friends, Arsha and Allen for their dedicated support in helping with the

transcription of the Malayalam language materials.

Lastly, but not least, I must thank my family, beginning with my parents Ajit and Sumam and parents-in-law, Padma and Vasu, for anchoring me in the present and preparing me for the future. A special thank you is owed to my niece Aaradhya for lighting up my life since she arrived on this planet. Gratitude is of course owed to my brother Anant, for his assistance in doing all those mundane yet important tasks for me. To my brother-from-another-mother, Mufsin, I thank for his quiet faith in me and his encouragement and patience with sourcing so many of the materials which were vital to writing this thesis. To my partner-in-life and in-crime, Geetha, I owe my eternal gratitude and love for your unwavering support and inspiration in this long journey, which has been in equal parts enlightening and challenging.

To all the others I may have inadvertently missed here, a big thank you, from the bottom of my heart.

Ashish

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ABBREVIATIONS

- 1) TMC: Thiruvananthapuram Municipal Corporation
- 2) ULB: Urban Local Body
- 3) NIMBY: Not In My Back Yard
- 4) MSW: Municipal Solid Waste
- 5) UPT: Urban Population Threshold
- 6) GoK: Government of Kerala
- 7) MT: Metric Tonnes
- 8) FACT: Fertilisers And Chemicals Travencore
- 9) PPP: Public-Private Partnership
- 10) BOOM: Build Own Operate and Manage
- 11) PSU: Public Sector Undertaking
- 12) GP: Grama Panchayath
- 13) MMK: Malinya Mukta Keralam
- 14) TpD: Tonnes per Day
- 15) JNNURM: Jawaharlal Nehru National Urban Renewal Mission
- 16) AMRUT: Atal Mission for Rejuvenation and Urban Transformation
- 17) SPCB: State Pollution Control Board
- 18) CDS: Centre for Development Studies
- 19) LSGI: Local Self Government/Governance Institutions
- 20) VYSG: Vilappilsala Yuvajana Samajam Granthasala
- 21) LDF: Left Democratic Front

- 22) GoI: Government of India
- 23) PRI: Panchayati Raj Institutions
- 24) HDPE: High Density Polyethylene
- 25) DTCP: Directorate/Department of Town and Country Planning
- 26) NGT: National Green Tribunal
- 27) UN: United Nations
- 28) RUC: Rural Urban Continuum
- 29) PVC: Poly-Vinyl Chloride
- 30) NBDW: Non-Biodegradable Waste
- 31) JVS: Janakeeya Vikasana Samithi
- 32) FRAV: Federation of Residents' Association, Vilappil
- 33) DYFI: Democratic Youth Federation of India
- 34) CRPF: Central Reserve Police Force
- 35) SLF: Sanitary Land Fill

CHAPTER 1

Introducing the Vilappilsala conflict

1. Introduction

In March of 2023, the city of Kochi in Kerala was covered in thick acrid smoke coming from Brahmapuram, the city's waste treatment plant- turned-landfill. The fires burnt for well over a week and continued to do so for nearly a fortnight. Twenty-five years after the establishment of the waste processing plant, the facility had been saturated and continued disposal of waste at the facility was viewed as an administrative and policy issue¹. This is, however, not the first time that waste and its management have been the subject of heated discussions in Kerala; the Vilappilsala conflict was a significant event in Kerala that highlighted the many challenges associated with waste and its management in contemporary times. Nearly, ten years ago in 2016, the Thiruvananthapuram Municipal Corporation (TMC)-the Urban Local Body (ULB) in Thiruvananthapuram- closed down its only biodegradable waste treatment plant that was located in Vilappilsala, on the fringes of Thiruvananthapuram city in Kerala. The biodegradable waste treatment plant or the factory (as it was popularly called) was at the centre of protracted protests led by the residents of Vilappilsala and nearby villages, who-citing the pollution of land and nearby water bodies- called to attention the detrimental effects the factory had had on their day-to-day lives.

¹ In conventional understanding waste management is thought of as an administrative problem of the city as well as a policy issue given that a large number of cities in Kerala are encountering similar challenges vis-à-vis disposal of waste

Numerous episodes of protests concerning waste management practices, have been observed against the ‘degradation, ‘depletion’ or ‘pollution’ of natural resources in Kerala such as those in Lalur in 1988, Pettipalam in 2012, Brahmapuram in 2013. Episodes such as these have several threads in common:

- 1) The model of transporting of waste for disposal to places far removed from the sources of production, or to less densely populated areas or to sites of waste treatment facilities often located away from the city or sources of production, has exhausted its potential due to a variety of factors such as increased volume and weight, type of waste produced, increased awareness among communities regarding the pollution from waste and so on.
- 2) The strategy of gathering waste and its disposal at a centralised facility, located remotely from the sources of production-while a viable option in terms of economic efficiencies and costs (for instance, the case of land in urban areas tend to be typically higher than in rural areas)- however is fraught with administrative/governance challenges. This is evident from the pollution caused by these facilities at the sites of their location.
- 3) There have been numerous disagreements -between the residents and village recipients and municipal authorities of cities (as senders of waste)- which initially manifested as public protests and later increasingly as conflicts.
- 4) These conflicts have mostly resulted in the closure of the said facilities. Driven mainly by the refusal to receive waste from the cities, the residents of recipient villages have engaged in protests against these waste management facilities.

Traditional and social media portrays conflicts such as Vilappilsala’s as instances of Not in My Back Yard (NIMBY)phenomenon (Umman, 2012; Capps, 2015).However, conflicts such as that of Vilappilsala’s paint a more complex picture, with many respondents arguing that the factory

and its mismanagement presented a clear and present danger to their day to day lives. The protesting communities attribute the malfunctioning of facilities as the one in Vilappilsala, to poor administration influenced by present policies and faulty and obsolete technologies, resulting in public health being adversely affected.

Conflicts such as the one at Vilappilsala are emblematic of the rapid urbanisation that is taking place across the world and points to an increasing number of conflicts arising on managing waste. Instances of these conflicts are pronounced in the developing nations where rapid and often unplanned expansions of the city present challenges to broader policy imperatives with regard to climate change, population growth and overexploitation of natural resources (Hoffman et al,2023) and more significantly vis-à-vis the present model of disposal of wastes. While the portrayal of the issue as one of urban-rural dichotomy continues to hold sway over much of larger academic and policy spheres (Hutchings et al., 2022), scholars such as Véron(2010);Sheppard et al.,(2013) and later Myers (2018) argue that the reason for these contradictory definitions lay, in part, due to the application of theorisations originally developed based on European experiences to situations placed in the Global South². Such Eurocentric theories when applied to the Global South often results in analyses that characterise urban experiences as either sites of economic prosperity or as slums and poverty, affixing an essentialist perspective that misses out on the nuances of the experiences in the Global South. Furthermore, as Angel et al., (2021) points out in the Global South, rapid urbanisation and associated spatial expansion often manifests in the creation of spaces termed variously as urban fringes, rururban areas (Revi et al., 2006; Hoffmann et al., 2023), periurban(Allen, 2003;Mcgregor et al., 2006), that straddle both urban and rural spaces and display

2 In this thesis ,the term Global South has been used here interchangeably with similar terms such as Third World and the Developing Nations.

mixed characteristics mostly in terms of land use, economic activity and so on. Traditionally the conceptualisations of urban, rural and periurban among policy/decision-makers and scholars diverge in their emphases, analyses, and interpretations. However, they share a common interest in revisiting, rethinking, and referencing historical patterns of connectivity in terms of *urban* policymaking and conceptual advancements and often tend to neglect the role of periurban spaces in construction of the urban.

Nevertheless, periurban spaces have garnered increased academic and administrative interests in recent times as spaces where the various processes of urbanisation unfold spatially. Approaches to periurban spaces therefore have tended to view them as transformative or transitional spaces, that reflect the social and economic shifts and processes associated with urbanisation. Broadly, these transformations have been approached from the vantage points of complementarity and conflict. For example, Hoffmann et al., (2023) conceptualise periurban spaces as being typically characterised by heterogeneous economic activities and land usages such as small and medium-scale farming, factories, mining facilities that form ‘zones of complementarity’, often coexisting with the urban. This approach is supported by Choithani et al., (2021) who focus on the occupational shift out of agriculture in periurban spaces as one of the major drivers in the changes to livelihood and migration trends—that Choithani and their co-authors rely on—in India. Dependent on geographical proximity to the city, the periurban spaces are characterised by the linkages and flows between the urban and the rural via the periurban. On the other hand, scholars such as Hutchings et al., (2022) characterise periurban spaces as ‘zones of turbulence’, where the rapid shifts in land use, livelihood provide fertile grounds for conflict and contestations. Marshall and Dolley (2019) observe that due to the rapid land use changes as well as increased economic activities in the periurban, appropriation of natural resources and environmental degradation often

spur contestations between various stakeholders, who most likely possess conflicting interests with respect to the said natural resources and its usage.

In either case, the depiction of periurban spaces as transformative or transitional spaces, provides a significant entry point into understanding such spaces by keeping social economic and environmental flux as central considerations to theoretical approaches. For the purposes of the present thesis, the characterisation of periurban as transitional spaces is premised on three broad characteristics:

- 1) Spaces that typically lie outside the traditionally defined territorial city.
- 2) Spaces that are the forefront of urban expansion, subject to rapid land use changes.
- 3) Spaces that capitalise on existing linkages to integrate themselves into the flows of goods, people and capital with the city.

Therefore, the current thesis presents the case of Vilappilsala as a periurban transitional space as told through the lived experiences of the residents. The evidence marshalled in this thesis would argue that Vilappilsala's case indicates concerns regarding implicit (sometime explicit) bias towards urban spaces in policy making vis-à-vis in India. Furthermore within the context of Kerala, the thesis uses Municipal Solid Waste (MSW) and its management as entry points to understand the contradictions and contestations that comprise the dynamic relationship between the urban and the non-urban, represented here by Thiruvananthapuram and Vilappilsala respectively. Therefore, the thesis argues it is imperative that research and policy both engage with lived experiences with respect to urbanisation, taking into account concerns of collective identity, environmental justice and unequal power relations revolving around urbanisation and rural-urban interactions.

2. Challenging Urban as discrete spaces

It is an oft-used euphemism that human beings have become an “Urban Species” (Keil, 2003). According to the UN World Urbanisation Report 2020 projects that the percentage of population in urban areas -currently at 56.2%- will touch 60.4% by the year 2030 (UN Habitat, 2020). Similarly, the World Urbanisation Report of 2022 notes that an overwhelming majority (96%) of increase in population would take place in the developing countries-especially in East Asia, South Asia and Africa (UN Habitat, 2022). In other words, the count of urban dwelling population in the world has increased dramatically with the most amount of increase originating from Asia, Africa and the Latin and South Americas. According to these statistics, “cities are here to stay; the future of humanity is undoubtedly urban” (Dudwick et al., 2011; UN Habitat, 2022). For many countries in the world, the policy, administrative and planning conceptions of urbanisation is often that of a phenomenon which is intimately tied to the economic growth and capital-intensive activities and the urban centres as drivers and accelerators of these capital-intensive activities (Seto et al., 2013). In the case of India the Census of India defines the urban-according to the census conducted in 2011-as a space where , “the populations must be at least 5000, the populations density should exceed 400 per square kilometre and 75 percent of male workers must be engaged in non-agricultural work” (Kundu, 2011). This conception of the urban as the ‘growth pole’ has informed much of the urban policies as well as the concept of urban itself (Adell, 1999) and has also reified the dichotomy of urban and rural by spatializing divisions typically on economic lines, between the bustling city and the quiet countryside between factories and farmlands. For instance, in many states of India, the Department (or Directorate) of Town and Country Planning (DTCP) along with associated agencies, is tasked with designating land use based on master plans. Put another way, although the census defines the minimum threshold of

urban (based on population), DTCP (and similar agencies) operationalise the territorial demarcation (via master plans). As Brenner et al., argue (2003, as cited in Hernández-García et al., 2018), “the State is the main producer of space, where State and territory interact in such a way that they can be said to be mutually constitutive”. Drawing on the 20th century urban studies scholarship, this emphasis on territorial or demographic aspects of urbanisation has continued into the 21st century. For example, concepts such as the Urban Population Threshold (UPT)³ read against territorial confines of the city continue to be considered as significant markers of reference vis-à-vis the urban and the rural. Brenner and Schmid (2015) through the Planetary Urbanisation thesis, however, argue that approaches considering urbanisation⁴ as the primary focus of conceptualisation must move beyond the understanding of the urban as a discrete entity. Instead, they call to approach urbanisation as a multi-scalar phenomenon. In this conception of urbanisation, the territorial anchor of the urban is considered redundant and instead the emphasis is placed on understanding transformations taking place across the world as a function of urbanisation as a multi-scalar phenomenon.

Criticism of planetary urbanisation however, has been advanced in the scholarship, with much of the criticism emanating from Asia, Africa, Latin and South Americas, raising two crucial arguments against planetary urbanisation thesis, namely:

3 UPT stands for Urban Population Threshold. The UPT is a set of criteria that is often used as a standard for defining urban and rural categories, defined by the European Commission. Urban is defined as “settlements of more than 5000 or more where contiguous 1 Km² grid cells have populations of at least 300 persons/Km² ...”. For more see, Angel et al., (2018)

4 Originally attributed to Henri Lefebvre’s work on an all-encompassing urban phenomenon, a complete urbanization, Neil Brenner and Christian Schmid (2015) further developed this notion toward a broader conception of urbanization as a universal phenomenon, toward a planetary urbanization.

- 1) *The assumption of exponential population growth:* Many theories including the Planetary Urbanisation thesis fundamentally assume exponential population growth as a planet wide phenomenon. However, such approaches do not take into account the unevenness in the growth of population among countries. As Zhang (2016) shows that the population growth is significantly more in developing countries than in developed countries.
- 2) *Totalising approach:* The application of the idea of ‘urban’ uniformly-as an abstract global phenomenon-is premised on definitions of urban that continue to be anchored in territorial conceptions. However, as Derickson (2015) argues such definitions fail to account for diverse lived experiences of urbanisation throughout the world.

This distinction between the urban and urbanisation, forms the crux of the problematisation of Planetary Urbanisation. Garth Myers(2018) pointing to the ‘Africa problem’ in urban studies has warned against applying big tent theories such as Planetary Urbanisation, which-Myers argues-have difficulty reconciling the contradictory nature of urbanisation in the Global South. Myers(2018) elaborates that, primarily due to their Eurocentric moorings, theories such as Planetary Urbanisation ignore the informal characteristics of urbanisation in the Global South. Scholars such as Schindler (2017) instead argue that theorisation of urbanisation at a global scale would require new paradigms. Marshalling evidence from the Global South, scholars such as Schindler(2017);Myers(2018;2021) challenge Planetary Urbanisation especially in terms of the “too easy transposition of analytical toolkits⁵ developed in the Global North”(Myers,2021) and highlight the absence of a diversity of experiences in the cities of the Global South, which Myers

5 Scholars such as Ananya Roy and Colin McFarlane have long questioned the validity of applying urban planning theories developed in the European and American contexts to the urban of the Global South. For more on this discussion, see A.Roy (2008); C.McFarlane,(2011,2018).

characterises as , “full of vitality and vibrancy, shock and disorder, spontaneity and fluidity”(Myers,2021).

Thus far we have observed that there has been an erasure of transitional spaces in two ways, firstly when the conceptualisation of urban as discrete entities is applied as a global, abstract phenomenon and secondly when the Planetary Urbanisation thesis is advanced as an alternative to discrete ‘urban’ conceptualisations. In both conceptualisations there is an assumed uniformity of lived experiences of people across the global. This assumption undermines the need to account for diversity present throughout the globe.

2.1.Institutional conceptions and informal urbanization in the Global South

Despite academic departures noted above, there are specific features of places in the Global South that ought to be accounted for in the calculus of the lived experiences of people. Ananya Roy (2009) for example, argues that the duality of urbanisation- between the official definitions and lived experiences- in countries such as India, is highlighted through the creation of formal and informal categories. For instance, it is important to note that while academic debates can disagree as to the usefulness of territorially bound urban, it is however, significant for civil dispute resolution, jurisdictional demarcation, for revenue collection and other ‘administrative practices’ (Castells, 1977 as cited in Brenner and Schmid, 2013). The active role of the state in creating and defining the urban as a territorially bound entity also results in the creation of other categories such as rural, with the underlying assumption here being that the bounded notion of the city operates in isolation without much connection to the rural or the countryside. This model of urbanisation has been prevalent in developed countries whose cities have been traditionally industrial in character and maintained an evident difference between the city and the countryside(Caldeira, 2017). On the other hand, as McFarlane, (2018) points out ,the categories of formal and informal while produced

by the state, are also nomadic in nature in that while several sections of the urban are produced by the designation of what is formal and what is not, it is also simultaneously produced by the residents, based on their lived experiences. Teresa Caldeira's (2017) work in Sao Paolo, Brazil has demonstrated the dynamic and ongoing manner in which the city is constructed; rather auto-constructed by the residents⁶. Therefore, while the urban is created by the state it is also simultaneously constructed by those who occupy the urban.

In other words, to reject the discrete notion of the urban is to ignore the informal characteristic along with the practicalities or functioning of daily lives of people that are territorially bound. It is also to be noted that the characteristic of informal is not static but depends on the state's definition as well as that of the lived experiences of the residents of the places termed as Urban. Furthermore, Randolph & Storper, (2022) argue that it is imperative that scholars incorporate the notion of urbanisation as a phenomenon that manifests in differing forms into theorisation, as definitions of the formal and informal(which is leveraged by the state) and in terms of lived experiences(which are formed on the basis of day to day encounters of the phenomenon of urbanisation and consequently, of the urban).They draw mainly from Angelo & Wachsmuth's(2015) critique of 'methodological cityism', arguing that contemporary urban studies research tends to focus more on the urban at the expense of the rural or spaces of mixed characteristics. Therefore scholars such as Banks et al., (2020) among others- highlighting the tension between the different conceptions of the urban - have relied on scholars such as David Harvey (1996 as cited in Zimmer et al., 2018) in arguing for examining urbanisation as a relational

⁶ For a detailed discussion on "Auto-construction", refer to T. Caldeira (2017)

phenomenon⁷. Viewing the urban as a construct and a function of social relations and processes, these scholars have advocated for separating the territorially bound feature of the urban and consequently broaden the scope of analysis(Jacobs, 2012).

Thus far we have observed the usefulness of the ‘urban’ not as a global phenomenon but limited to the practicalities or daily lives of people in places termed as urban. Furthermore, the dichotomy of ‘urban and ‘non-urban’ has shown to be problematic both for policy/decision-makers and for academic scholarship. To overcome these limitations and to signify urban and non-urban simultaneously, scholarship- inspired by Robert Redfield’s Folk-Urban Continuum- has advanced the concept of Rural Urban Continuum⁸ (RUC).

2.2. From Continuum to Processes

Historically, the RUC has been employed to understand the relationship between the city and the countryside from a dichotomous view(Oommen, 1967). In response to criticisms of the deterministic connotations of the continuum concept, the meanings attributed to the RUC have shifted and expanded over the years to that of a heuristic tool. RUC’s usefulness as a heuristic tool is in allowing a focus of research on places of mixed characteristics that simultaneously can and cannot be classified as urban and rural. Keith Halfacree, (2009) argues that there has been a resurgence of interest in not only understanding the concept of continuum but to also operationalise research in terms of the continuum. Terrence McGee’s (1991 as cited in Adell, 1999) notion of the

7 The Oxford Dictionary of Human Geography defines Relational Space as “Any space that is produced by, rather than existing as the a priori container of, processes and relationships.”

A Dictionary of Human Geography (Oxford Quick Reference) (p. 424). OUP Oxford. Kindle Edition.

8 The Oxford Dictionary of Geography defines Continuum as: “the belief that between the truly rural and the truly urban are many ‘shades of grey’; if we actually look along a scale from the single isolated farm all the way to the megalopolis”. A Dictionary of Geography, (Oxford Quick Reference) (p.1568).OUP, Oxford. 6th Edition.

Desakota was an early example of operationalisation of the RUC in the Asian context. McGee's approach was grounded in understanding the interactions among urban, rural and mixed spaces focusing mostly on shifts in economic activity, from agricultural to industrial. Similarly, Cattaneo et al.,(2021)'s work also uses a similar approach to examine the connotations of the continuum of economic activities in the 21st century. Common to approaches such as the *Desakota* was a departure from the territorial conceptions of urban and rural, instead they advocated for approaching the urban, rural and non-urban as forming functional part of a continuum, depicted as an Extended Metropolitan Region (EMR)(McGee, 2022 ;Ortega, 2012). However, scholars such as Allen (2017), Myers(2018), Smit(2021) Randolph and Storper(2022) contend that the continuum model has continued reliance on viewing urbanisation in accordance to Euro-American assumptions of spatial growth of cities. Instead, these scholars argue that contrary to the centrifugal and centripetal spatial formations of the cities in the Euro-American context, the cities in the Global South follow a much more fragmented pattern, resulting a rural-urban divide that Allen(2017) describes as 'lumpy'. For instance-observing in the context of India-Nagendra and others (2018) highlight, that "Urban growth in India is often nucleated, with newly urbanized land usually seen in a tight band around the older parts of the city. In high growth cities like Bangalore and Pune, the city centre maintains a fairly steady population because of a scarcity of land, while the city grows outwards, leading to increased fragmentation at the periphery" (Taubenböck et al. 2009 as cited in Nagendra et al., 2018).Furthermore, Goswami explains that cities in the Global South are "are dynamic landscapes under the influence of urbanization. In developed regions, they form a zone of spatial restructuring with social and economic changes, while in the developing world, these are locations of chaotic sprawl formations" (Goswami, 2018). The argument scholars such as Allen(2017), Nagendra et al.,(2018) and Goswami(2018) make is that while the RUC is a

significant heuristic tool to recognize the dangers of dichotomous framings of the urban and the non-urban, its core assumptions continue to be anchored in spatial patterns drawn from the Euro-American contexts and therefore struggles to be operationalised in countries such as India. In other words, while concepts such as the RUC highlight the limitations of 'urban' dichotomy and planetary approaches to urbanisation by placing emphasis on considering urban and non-urban spaces as part of a continuum, in practical terms this approach has failed to account for the fragmented characteristics of urbanisation in countries such as India, in the process showcasing that the practice of distinguishing explicitly demarcated places as rural or urban, continues.

On the other hand, scholars such as Appadurai(2000), Olds (2001) and Roy(2011), Angelo and Wachsmuth(2015) argue that an alternative approach would involve placing emphasis on the processes that make up urbanizations as foci of analysis. Similar to Appadurai's (2000) concept of 'process geographies'⁹, Angelo and Wachsmuth's(2015) call for eschewing methodological cityism necessarily emphasises a shift from looking at the movements of people, animals, knowledge, goods and capital as substantive landlocked and fixed human groupings. Instead, scholars such as Appadurai, Angelo and Wachsmuth, argue that a processual approach would account for the myriad kinds of interactions between the urban and the non-urban which not only include trade of goods, movement of people and capital but also environmental flows, weather patterns and so on. This approach, emphasising the linkages between the urban and the non-urban, is significant for its understanding that the urban and the non-urban are not only fluid categories

9 Process geographies was initiated by Arjun Appadurai at the turn of the 21st century as a new approach to area study.

Appadurai describes a processual approach to area studies as seeing significant areas of human organization as precipitations of various kinds of action, interaction and motion that include, trade, travel, pilgrimage, welfare, proselytization and so on. Appadurai further argues that such processes are necessarily large scale and shift and consequently their changes highlight variable congeries of language, history and material life. A.Appadurai(2000).

but that the processes associated with urbanisation are transitional in nature, a notion that an emerging set of literature locates in the spaces of mixed characteristics termed in this thesis as periurban.

3. The periurban in transition

As mentioned earlier in the chapter, there is now a growing body of literature that is dedicated to understanding the periurban as transitional spaces by placing them at the centre of analyses. Scholars such as Shenk (2005) argue that the periurban represent a ‘rolling fringe’, as arenas where the process of urbanisation unfolds, while Allen (2003) characterises the periurban as an interface¹⁰ between the urban and the rural. McGregor et al., (2006) concur with both Allen and Shenk in pointing out that much academic literature has looked at periurban spaces to be connected to the transformative and transitional processes of the urban itself. This literature asserts firstly, that the periurban is intimately tied to the urban in a dynamic relationship. For instance, it is well documented that the urban relies on periurban spaces for a variety of goods, such as agricultural produce, labour and even capital (Vij & Narain, 2016; Narain et al., 2014; McGregor et al., 2006; Allen, 2003). Secondly, by challenging the characterisation of periurban as passive entities, scholars such as Veronique Dupont (2005) suggest that periurban spaces “represent unprecedented socio-spatial dynamics”, arguing that “these changes are even more spectacular when seen against the backdrop of rapid urban growth, in developing countries, including India”. However, the markers of such transitional processes continue to be read against the urban as the point of reference and consequently, much less is known about these dynamics from the perspective of the periurban per se. In other words, the periurban has been portrayed as being generally associated

¹⁰ Specifically as a Peri-Urban Interface(PUI). For more see A.Allen (2003)

with informality, unplanned urban expansion and resource conflicts, often portrayed as spaces that are expected to become urban in the near future¹¹(Follmann, 2022). Emerging literature such as that of Hutchings et al., (2022), Hoffmann et al., (2023) analyse the periurban through the lens of change. Here-building on the concepts of urban transitions-these authors have argued that periurban spaces can represent instances of turbulence(Hutchings et al., 2022) viz; for many in the Global South, being periurban often means being in an unequal relationship with the city. This is however, not to say that the urban and the periurban do not share a reciprocal relationship. In fact, as many cases tend to show, the periurban is dependent on urban capital for much of its residents' livelihoods among other 'goods'. Yet, as this thesis will show, despite the many 'advantages', the burdens (the environmental one, especially) borne by the periurban can be disproportionate and often unjust, providing fertile grounds for conflict and contestations. An Urban Political Ecology of the periurban would bring closer scrutiny to these contexts which are found to be ground for conflicts and contestations, potentially (Priya et.al 2017).

In other words, while literature has acknowledged the flows and linkages between the periurban the urban, the lens of analyses has tended to favour the perspective of the urban and has therefore,often ignored the unevenness of the interdependence between the urban and periurban. This oversight has not been limited to academic scholarship¹², but also to policymaking (Hutchings et al., 2022). As cities have continued to expand spatially, these periurban have therefore, become sites of contestations. Accordingly, scholarly perspectives advanced to explain such conflicts

11 Abdumaliq Simone terms this tendency as the "city yet to come". For more see, A. Simone (2004)

12 while academic scholarship has been attentive to the periurban it has been so in reductivist manners, emphasising the only certain aspects of environmental degradation such as of a valuation perspective and are viewed as part of the larger ecosystem services theory and other strands.

point the following gaps in existing approaches:

- 1) The historical context of urbanization has been poorly accounted for and therefore works toward developing an a-historic understanding of the periurban. This has led to the conflicts are seen as a reaction to the growing burden of environmental ‘bads’, which the periurban receives from the city (Janakarajan, 2009).
- 2) The inhabitants of the periurban are often thought of as part of the flux that characterises the rapid urbanization, as opposed to conception of such people as having long term tied to the periurban. This results in the ignoring these inhabitants’ need for deliberation and participation in the processes of urbanization (Petts, 2000).

Continuing this line of enquiry, the present thesis argues for a nuanced understanding of the periurban. Therefore by taking the case of Vilappilsala in Kerala, the thesis approaches the evolving nature of periurban as analytical categories to interrogate the relationship between the city and the periphery. In emphasising this instance of conflict between a city and a periurban area the effort is to study how periurban areas are sites of social transformation, as read against a mix of unplanned urban expansion and resource conflict around waste management practices,.

4. Vilappilsala: site description and selection

It is in this background that this thesis examines the case of Vilappilsala's conflict with Thiruvananthapuram Municipal Corporation (TMC) in 2011-16. While Solid waste management is not a novel phenomenon, figuring as early as 1960s(Hand in Hand, 2007),the 10th Five-year plan (2002-2007)¹³ was one of the first national policy documents in which solid waste management, disposal and its treatment were given increased prominence. However, Kerala had planned to manage solid waste in its urban centres early on- mostly as response to the Laloore agitation in 1988("Laloore's War against Waste Turns 25," 2012)- and subsequently began the process of establishing a centralised Municipal Solid Waste Management plant in Vilappilsala¹⁴, close to the state capital, Thiruvananthapuram.

¹³ The Five-year plans were produced the erstwhile Planning Commission (now NITI Aayog),

¹⁴ Since the Panchayathi Raj Act of Kerala-it was passed in 1994- had not yet been passed and therefore the area was commonly referred to as Vilappilsala, located in the Kaattakada province.

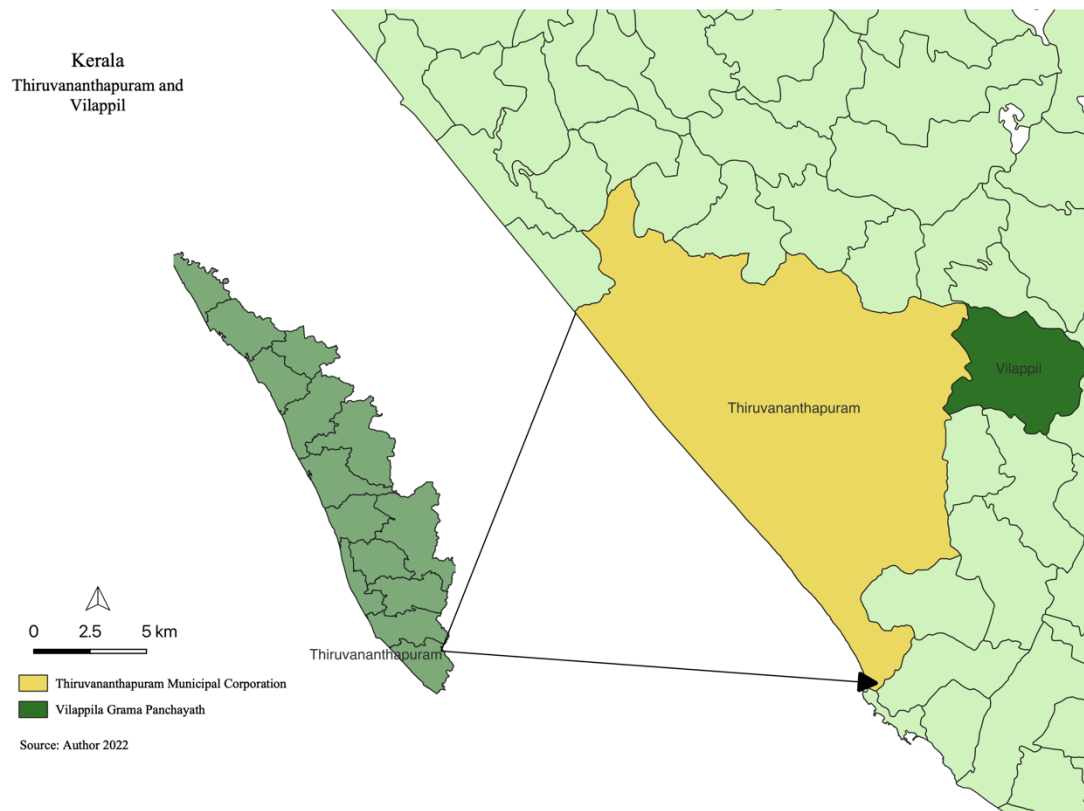


Figure 1. Thiruvananthapuram Municipal Corporation and Vilappil Grama Panchayath

Vilappilsala lies approximately 14 KMs North-East of Thiruvananthapuram and until 2011, played host to the city's lone Bio-degradable waste processing plant. Based on its decision to establish the biodegradable waste plant, the Government of Kerala (GoK) had commissioned a study to gauge the quantum and nature of solid waste being produced in the city. On the basis of this study, it was approximated that the solid waste generated in the state of Kerala stood at 8300 MT per day. Of this approximately 300 Tons per day (TpD) was produced by the city of Thiruvananthapuram (Ambat, 2003). Ambat (2003) further observed that 181 Metric Tons were from households consisting of 70-80% biodegradable and were therefore putrescible waste. Based on this approximation of quantum and type of waste produced the Government of Kerala-through

the Thiruvananthapuram Municipal Corporation- awarded the land parcel acquired in Vilappilsala to POABS Envirotech Pvt. Ltd. via Public-Private Partnership (PPP), for the construction of the biodegradable waste management plant. The factory was established on a Build-Own-Operate-Maintain (BOOM) basis. Under this arrangement, the TMC was responsible for collecting municipal waste and transporting it to the factory and POABS-Envirotech was responsible for converting the waste into biofertilisers. This product in turn was to be sold to Fertilisers and Chemicals Travancore (FACT)¹⁵, yielding the TMC two per cent of the selling price as royalty (Nair, 2015).

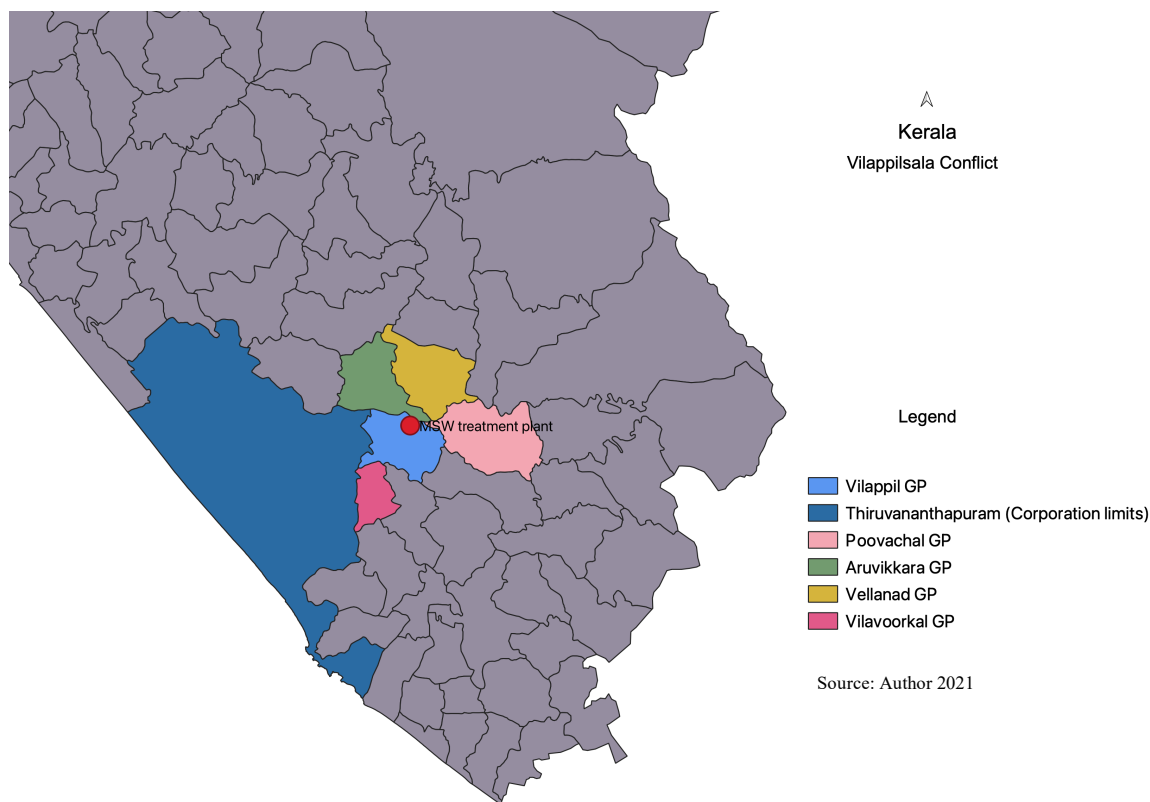


Figure 2. The Vilappilsala conflict

15A Public Sector Undertaking (PSU) under the Government of Kerala; FACT would in turn sell the fertilizers at a subsidized cost to the farmers in the state.

At Vilappilsala, there had been a concerted effort ever since, 2011, to deny the city of Thiruvananthapuram, a site for continued disposal of solid waste. In 2012, the residents of Vilappil and nearby villages of Aruvikkara and Poovachal, Vellanadu and Vilavoorkal¹⁶ launched a prolonged struggle, that included human chain formation and relay hunger fasts to blockade the entry of Solid waste transporting trucks from entering into the village. The Grama Panchayath has linked operations of the waste management plant to adverse health consequences to the residents of Vilappilsala and nearby villages. The protesters persisted despite separate orders by the Kerala High Court and the Supreme Court (allowing the TMC to carry out its operations in Vilappilsala) and police action that followed. To enforce their writ; the Grama Panchayath was successful in securing a favourable legal order restraining the TMC from disposing waste. Later in 2015/16, in accordance with an order by the National Green Tribunal (NGT)¹⁷ the factory ceased all operations and was abandoned by the TMC.

5. Rationale, Significance, and Research Questions

As mentioned in earlier, interrogating the conflict surrounding the Bio-degradable Waste Treatment plant at Vilappilsala is used here as a vantage point to launch an investigation into the dynamic nature of periurban spaces. To do so the study trains its focus on asking questions that probe the nature of the mobilisation of the protests at Vilappilsala, the issues and contestations that were articulated to the identities that were so formed and expressed. However central to these questions is the assumption that the periurban spaces are dynamic and in the process of change¹⁸. It

¹⁶ Initially under the aegis of the Janakeeya Samithi, a Joint Action Committee formed by the residents of Vilappilsala and concerned stakeholders to deliberate upon the issue at hand and coordinate responses along with the village panchayath. The Janakeeya Samithi later split into the Janakeeya Samara Samithi and Samyukta Samara Samithi.

¹⁷ Chennai Bench

¹⁸ I draw from Shenk's conception that periurban areas represent a rolling fringe of the city. For more see H. Shenk, (2005)

therefore, proceeds on the assumption that this change- where communities are continuously negotiating and navigating their everyday lives- is bound to produce conflict and contestations. It is in this dynamic nature, the fluidity, and the transitional nature of these liminal spaces that the study locates itself. The selection of the case of Vilappilsala is also largely influenced by the impact that Vilappilsala conflict has had on the broader policy making scenario in Kerala, and as such the thesis argues that it would provide a unique opportunity to examine a social conflict with regards to waste management .In examining the Vilappilsala conflict the thesis raises fundamental questions regarding the nature of urban expansion in India, where in primacy is accorded to cities over villages as sites of economic and political capital(Denis & Zérah, 2017; Mukhopadhyay et al., 2016). The Vilappilsala conflict is hypothesized as an instance of where this implied hierarchy in conventional analyses does not hold and affords an opportunity to examine social practices of residents and Gramapanchayaths in asserting their positions against an ULB(Urban Local Body) and national policies vis-à-vis MSW and its management.

5.1.Research Questions

To understand Vilappilsala's struggle against the Thiruvananthapuram's Biodegradable Waste Treatment Plant, the thesis addresses the following questions:

- 1) What were the socio-political contexts that led to the conflict in Vilappilsala 2011-12?
- 2) What were the mechanisms by which resistance at the Vilappilsala conflict was organised and structured?
- 3) How did the Vilappilsala conflict influence the socio-cultural identity of the residents?

6. Conclusion

Together, lived experiences and evidence from addressing these questions allows for spotlighting of urbanisation that markedly differs for different communities and challenges the widely used spatially anchored definition of the urban and casts urbanisation as processes. The thesis contends that in the Global South it is not enough to study either urban or rural spaces in isolation, rather it is imperative that they be studied relative to each other and to emerging formations such as periurban spaces as well. In approaching periurban spaces as transitional spaces, the thesis argues that urban transformation can be a process of contentious change. Furthermore, by taking Vilappilsala's case, the thesis turns to further understanding the role of periurban spaces in urban transformations. Drawing on literature in Environmental Justice, Political Ecology and Urban Political ecology, along with Human Geography, the thesis interprets the Vilappilsala conflict. Furthermore, the thesis examines the role that 'irrational' factors, such as, familiar attachment, sociability, and stigma bring to bear upon the conflict at Vilappilsala.

The findings of the study are two-fold. Firstly, the framework used in the study- a matrix of Situated Urban Political Ecology and Extended Case study Method- is helpful to chart the course of the conflict that occurred in connection with Municipal Solid Waste Management. Secondly, in using this framework matrix, the study challenges the dominant or prevailing model of treating Municipal Solid Waste as a problem that is to be solved by removing waste, 'out of sight' (Nixon, 2011) and thus putting pressure on administrators to find fresh areas that can support the urban's demand for disposal and management sites. More significantly, however, the thesis establishes the requirement for contextualised policy making. This kind of policymaking would re-examine the existing theorizations of urbanisation, urban regions, Environmentalism and risk-assessment, and

reconceive them in a relational approach, which would take into account the affective ties that residents have to their land and ways of life stemming from lived experiences of urbanisation.

7. Overview of the thesis

The thesis is divided into six chapters including the Introduction and Conclusion.

1) **Chapter 1** introduces two issues:

- a. The contradictory and sometime starkly different conception of the urban and urbanisation in the Global South. The chapter also discusses the mismatch in between differing conceptions of urbanisation between academic and administrative definitions.
- b. Against this background the chapter investigates the phenomenon of periurbanisation and periurban spaces as places of urban transformation.

The Vilappilsala conflict is used as an example to elaborate and problematise the above-mentioned issues and therefore forms the background for the thesis. The chapter proceeds to elaborate the major research objective of the thesis and the questions that would seek to analyse and fulfil these objectives.

2) **Chapter 2** serves as a literature review and lays out the theoretical portion of the framework anchoring the thesis. Locating itself within the broader rubric of Urban Political Ecology, the chapter approaches waste and its management, emphasising its transboundary character as well its sociomaterial nature. Following emerging research in UPE, the chapter relies on the works of Lawhon et al., (2014); Bartels et al., (2020); Tzaninis et al., (2021) to explore the ‘situating’ and/or ‘provincializing’ of UPE. Examining the emergence of periurban spaces as an analytic entities separate from yet deeply connected to the urban,

the chapter argues for approaching both waste and periurbanisation from a relational perspective, eschewing territorial boundaries, that were hitherto central to analyses.

- 3) **Chapter 3** elaborates the methodological component of the thesis's framework. The primary output of the thesis is designed as a case study and anchors itself in the methodological philosophy of the Extended Case study Method, popularised by Michael Burawoy(1998, 2009). Therefore, the present thesis relies on utilising a qualitative research design to understand the Vilappilsala conflict in conjunction with broader processes of urbanisation and globalisation, arguing that ECM can be used a viable approach to study conflicts such as Vilappilsala's. Finally, the chapter details the specific steps and processes involved in gathering data and in analysis of the data gathered toward the study.
- 4) **Chapter 4** delves into presenting the case of the Vilappilsala conflict. The chapter situates the Vilappilsala conflict by contextualising the management of waste in India as well as in Kerala. The chapter then moves onto elaborating the Vilappilsala conflict. The case is reconstructed based on responses collected during interviews obtained by primary research along with analysing various secondary sources such as court filings, affidavits and rulings coupled with publicly available documents such as reports by various agencies associated with the conflict such as the Kerala State Pollution Control Board and the Centre for Environment and Development. The chapter primarily seeks to answer two questions, namely, what were the mechanisms by which the resistance at Vilappilsala was organised and structured? What were the socio-political contexts that led to the conflict in Vilappilsala during the 2011-16. The chapter elaborates the mechanisms used by the agitators to organise and structure their protests during 2011-16 and places it as the background of the larger socio-political contexts that led to the conflict.

5) **Chapter 5** critically interrogates the socio-cultural impact of the Vilappilsala conflict, mostly on the residents in Vilappilsala and nearby villages. The chapter contends that conflicts such as that of Vilappilsala's characterisation as NIMBY is erroneous and can therefore divert research focuses on examining questions vis-à-vis stigma, reputation, and collective identity. Finally, the chapter argues that the factory as well as the conflict had significant social and cultural impacts of upon the residents of Vilappilsala and consequently for understanding the aforementioned questions within spatial frames of reference.

CHAPTER 2

(Peri)Urban Political Ecology: A review of literature

1. Introduction: Towards a (Peri) Urban Political Ecology

This chapter elaborates how an Urban Political Ecological framework can be tapped into understand spaces (such as that of the periurban) that challenge the traditional dichotomy of urban and rural. More specifically, the chapter relies on harnessing Political Ecology and Urban Political Ecology scholarship to provide an undergirding framework to examine the case of Vilappilsala, which has been introduced in Chapter 1. In the previous chapter it was shown that, the tangle of cities and nature has been a focal point of literature in the social sciences from the urban backdrop of Durkheim's *Suicide* to Marx's critiques of capitalism to the 'Chicago' school's pioneering work in urban studies in the 19th and 20th centuries. Underlying these conceptions was the fundamental assumption of nature and city as distinct entities that encounter each other in adversarial fashions (which I refer to as the central separation). As Castree(2001) points out, this assumption continued well into the 21st century where Lefebvre's work on 'second natures' extended the theoretical engagement with the relationship between nature and the city.

However, the central separation persisted nevertheless, undergirding much of the literature produced. This included theorization on Political Ecology as well, which had sought to engage with questions about the relationship between nature, politics, and society, by focusing on power and inequality. Consequently, the initial focus of Political Ecology -be it Blaikie and Brookfield's

seminal contribution (1987) or Bassett's(1988) analysis of peasant-herder conflict in the Upper Sahel region- continued with this separation of the nature and city and consequently, pursued research agendas of examining power and inequality in mostly rural settings. In the decades of 1990 and early 21st century, scholars such as Erik Swyngedouw, Nik Heynen, Maria Kaika, and others noted a rural-bias in the research emphasis of Political Ecology; with Swyngedouw and their co-authors (2006) noting that, "...little attention has been paid so far to the urban as a process of socio-ecological 'change'". In other words, the predominance of the central separation and a focus of the scholarship on the rural settings in Political Ecological theorization was challenged by the works of Swyngedouw and his contemporaries who sought to emphasise the need for an Urban Political Ecology (UPE) that focuses on the dynamic relationship between nature and the city, sans the adversarial and oppositional connotation of the central separation. One of the core arguments of Urban Political Ecology was that the combination of nature and society (in this case the city) produced hybrid structures. The portmanteau term of 'socionatures' has often been used to signify this reimagined relationship between nature and the city. In this way Swyngedouw's work, and Urban Political Ecology in general, moved away from the traditionalist views of nature-analogous city established by the Chicago school and instead emphasized the material effect of nature in the production of the city. Swyngedouw(1996) argues that natural processes are not external to the social; rather, the central separation of nature and society often serves to mask the processes that coproduce the urban and nature(Bear, 2017). As Angelo & Wachsmuth, (2015) point out "instead of seeing cities as social rather than natural, or urban injustice and inequality as natural rather than social, UPE made cities visible as political worlds, the politics of which are constitutively socionatural". This conception of socionatures emphasizes the coequal status of nature and city are accorded in UPE(Bear,2017) and is thereby a simultaneous extension and a

critique of the Lefebvre's conception of second natures and Marxian influence in UPE.

Parallely, a call to shift to UPE has also come from Critical Urban Studies and Environmental Anthropology, and in the emerging theories such as Planetary Urbanisation (Brenner & Schmid, 2013). This shift in theorization for scholars such as Caldeira(2017), Myers(2018), Lawhon et al.,(2014),Gandy(2022) stems from their disputing the distinction of city with respect to non-city. Consequently, Angelo and Wachsmuth (2015) call for research agendas to move beyond the categorical boundaries of the urban, especially given that unlike in cities of the Global North, the particularities and everyday realities of cities of the Global South are such that they often live in the shadow of colonization. Angelo and Wachsmuth (2015) suggest examining the processes involved in urbanisation beyond territorial confines which allows for focusing upon often overlooked in-between spaces. Bartels and co-authors use the term 'periurban' to characterize these in-between spaces. In following the Urban Political Ecological approach of examining cities, the chapter considers periurban spaces as forming part of the socionatural entities in the urban. Moreover, to gain a nuanced understanding the periurban, the chapter argues for a framework that articulates itself from the standpoint of the periurban. Consequently, the theoretical strands of Situated Urban Political Ecology (SUPE) advanced by scholars such as Bartels, et.al, (2020) and other such as Lawhon et.al, (2014) is extended.

In the sections below the chapter organizes the literature on Political Ecology and Urban Political Ecology into four broad themes namely, Power, Conflict, Environmental Justice/Injustice, and Scale. Together, these four themes serve primarily to contextualize and connect the two conceptual pillars of the thesis, namely periurban spaces and waste to form a framework for analysing the Vilappilsala conflict.

2. The nature of Political Ecology

Before engaging with Urban Political Ecology, it is imperative that one examines the Political Ecological foundations of UPE. Drawn from various disciplines such as Anthropology (Vayda & Walters, 1999), Human Geography (Marxist Human Geography in particular) (Roberts, 2020) and other allied disciplines, Political Ecology (PE) rose mainly as a response to an apparent lack of engagement with “the political dimensions of human/environment interactions” especially in Political Economy approaches (Durham, 1995 ; Moore 1996 as cited in Vayda and Walters, 1999). Darcy Tetreault points out that Political Ecology, “refer(s) to multiple and diverse critical approaches to studying the nexus between human societies and the natural environment. Definitions are abound, but they are not entirely consistent and they have tended to become broader and somewhat more ambiguous with time” (Tetreault, 2017). Political Ecology has been viewed and applied as both a methodology and as a theoretical approach in own right. Bassett & Peimer, (2015) define Political ecology as “...a diversity of theoretical and methodological approaches to socioecological relations that share a common interest in questions related to the politics of natural resource management, access, and control, environmental knowledge, and their interactive effects on livelihoods and environmental change dynamics”.

As a theoretical enterprise, Brosius (1999 as cited in Tetreault, 2017) opines that Political Ecology contains within it two broad influences: a critical and materialist one and a post-structural and constructivist one; both produce distinct strains. Michael Watts (2015) comes to a similar conclusion, arguing that much of the early works in Political Ecology were drawn from Marxist

Geography¹⁹ and Dependency theories²⁰ - evident in the scholarship- starting with Blaikie and Brookfield's 1987 work(widely considered to be one of the most significant works on Political Ecology).This "more or less Marxist"(Watts, 2015) theoretical strand represented by Blaikie, Brookfield and similar scholars was built upon the consideration that nature and society were dialectically constituted through relationships of production and control over resources and capital (Smith 1977; Sayer 1979 as cited in Watts, 2003).

In the ensuing years, this conception was, however, criticized for its disproportionate emphasis on structural factors and the relative lack of attention to the agency of individual actors. Advances in this direction have produced scholarship that sought to understand the relationship between nature and society at a more 'local' scale, with scholars giving more weightage to communities' views, narratives and everyday practices; inspired by the broader poststructuralist movement.

A third and emerging conception of Political Ecology advances a relativist perspective²¹ that combined the approaches of both Marxist and Post-structural influences, with Gavin Bridge et al. (2015) point out that one must recognize that Political Ecology is best understood as a series of commitments, summarised as the following:

- 1) "...a theoretical commitment to critical social theory and a post-positivist understanding of nature and the production of knowledge". (Bridge et al.,2015)

19 The term PE was initially coined by Eric Wolf. For more see, E. Wolf, (1972), *Ownership and Political Ecology*.

20 Indeed, as Aletta Bierstack observes, "Political ecology's political economy is not the political economy of Marx and Engels. Rather, it grew out of "dependency theory," associated by anglophones with the writings of Andre Gunder Frank (1969), and the "world system theory" of Immanuel Wallerstein (1974) (Biersack & Greenberg, 2006)". For more see, Biersack and Greenberg (2006).

21 P.Robbins (2004;2012) and later D.Tetreault, (2017)

The enterprise of Political Ecology is not merely characterized by questions of agrarian dynamics, resource conflicts and deforestation; instead, the remit of Political Ecology is to question the assumptions that are held with respect to the socio-political character of human-nature relations.

- 2) “...political ecology is characterized by a normative political commitment to social justice and structural political change. political ecology is an explicitly normative intellectual project, which has from its beginning highlighted the struggles, interests, and plight of marginalized populations: peasants, indigenous peoples, ethnic and religious minorities, women, the poor”.(Bridge et al.,2015)

Environmental Justice/Injustice scholarship has played a significant role in the development of Political Ecology. Ryan Holifield (2015) points out that “environmental marginalization and inequality are at the heart of both the research program of political ecology and the concept of environmental justice”. Therefore, Political Ecology’s lineage of critical and historiographic scholarship has ingrained within it “a democratic and emancipatory political process through which such politically embedded ecological transformation takes place” (Swyngedouw, 2015).

- 3) “... political ecology retains a methodological commitment to in-depth, direct observation involving qualitative research of some sort, often in combination with quantitative methods and/or document analysis”.(Bridge et al.,2015)

Political Ecological scholarship has often acknowledged the situated nature of knowledge creation. Scholars such as Swyngedouw, Keil, and Gandy, among others, have underscored the situated nature of knowledge. Therefore, Political Ecology as an intellectual project has privileged the

process of co-production of knowledge, often with non-academic partners²².

Similarly, Paul Robbins (2012) points out that much of political ecological scholarship has been based on five ‘theses’²³ or central propositions and the several questions that they sought to answer. These theses were namely, (1) Degradation and marginalization, (2) Conservation and control (3) Environmental conflict and exclusion (4) Environmental subjects and identity (5) Political objects and actors (Robbins, 2012). Drawing on Robbins’ and Bridge et al., I have interpreted these theses as three crucial principles for the articulation of a Political Ecological (and Urban Political Ecological) framework:

- 1) Nature is not ‘Natural’: Challenging the central assumption of much of the earlier work regarding human-nature relationship, Political Ecology recognises that Nature is not a separate entity divorced from the human sphere. Rather it is a socially, politically, economically, and historically constructed entity. Therefore, nature and natural phenomena are affected by human interactions in terms of patterns of control, access, and power.
- 2) Conflict is a fundamental part of Political Ecology: Considering the socially, politically and historically intertwined character of society-nature relationships the difference in terms of power, control and access can potentially result in conflict. For Political Ecology, conflict is foundational aspect of society-nature interaction, where conflicts are treated as

22 For instance, see E. Swyngedouw (1993), M.Armeiro and G. D’Alisa(2012), where the authors have produced their research with much more involvement of their respondents than is the case in traditional research by adopting practices that draw from participatory and action-based research.

23In a testament to the evolving nature of political ecological scholarship, Robbins’s classification initially contained four theses as opposed to the current five. For more see, P.Robbins, (2004; 2012)

entry points of analyses as opposed to indicating breakdowns. The influence of politics in society-nature relationships often manifested as difference, exclusion, and marginalisation.

- 3) Encouraging a critical and counteractive approach to inequality and marginalisation: In understanding and acknowledging differences and exclusion involved in society-nature relationships, Political Ecology is encouraged to move beyond that of observation and description. Rather scholarship in Political Ecology is encouraged to be praxis driven, by encouraging agendas and visions of change that counteract injustices, inequalities and marginalisation, sometimes with activist leanings, into pressing issues. By critically analysing phenomena of power, control and access, Political Ecology positions itself as a disciplinary endeavour that not only explores and describes inequalities and marginalisation in human-nature interactions but also articulates frameworks for approaching equitable solutions.

Considering the various strands of scholarship that have emerged out of Political Ecology, from its Marxist origins to its post-structuralist practices to its general activist demeanour, the evolving nature of Political Ecology is evident. However, several authors such as Roger Keil (2003;2005;2020) and later Gandy (2022) have argued that while these principles encompass most of the research agendas of Political Ecology, they do exclude some important themes such as that of scale, which can provide additional layers of analyses. For instance, Keil (2003) points out that the myriad and intercutting phenomena that facilitate the “rescaling of both natural and social relations” necessitates a perspective that factors in how “local life worlds are brought into more direct relationships with natural processes beyond their immediate reach” (Keil, 2003). The addition of scale as an organizing thematic opens up avenues for analyses that go beyond

traditional bounded and territorial units such as the city, the village; or nation-provinces among others.

In keeping with Keil's critique, the present chapter leverages these principles and extends it by adding a fourth theme, that of scale to then examine and organise the literature surveyed:

I. Power

As mentioned earlier in the chapter much of Political Ecology research has power at the centre of its research enterprise and its scholarly approach (Svarstad ,2018). However, the definition of power in society-nature relationships are disputed. For instance, Watts (2003) points out that the definition of Political Ecology-reflecting a neo-Marxian reading of power-“comprises [of]complex relations between nature and society through a careful analysis of what one might call the forms of access and control over resources and their implications for environmental health and sustainable livelihoods”.

On the other hand, neo-Marxian conceptions of power ,however, have been challenged by post-structuralist conceptions of power which drew from a variety of scholarly sources such as the works of Gramsci, Foucault, Hajer, among others(Watts,2015).Emphasising the diffused nature of power Svarstad et al., (2018) classify its manifestation -in terms of nature-society relationships- into three categories: a) discourses b)biopolitics c)governmentality. Discursive power “shows how some actors exercise power through the establishment of discourses on issues and narratives of specific cases in ways that are suitable to themselves” (Svarstad et al., 2018). Governmentality and Biopower extend this perspective and examine environmental governance and the relationship between the government and subjects, in terms how environmental subjects are made and how governments employ various tactics to establish and maintain power and control over the subjects(Agrawal, 2005) .The essence of this conception of power is that it is, “ diffuse, residing

nowhere but enacted everywhere” (2013 as cited in Zimmer et al., 2018).

More recently scholarship has sought to read questions of equity, justice and conflict against the various conceptions of power in Political Ecology. Consequently, Peluso and Ribot(2003) and later Sarah Paulson et al.,(2003) synthesize neo-Marxian structural and Post-structuralist analyses of power to define of power in terms of “a social relation built on an asymmetrical distribution of resources and risks... [located in] the interactions among, and the processes that constitute, people, places and resources”. It is important to note here that the notion of asymmetry and risk is vital for the conception of power. Such notions of asymmetry and risk have often driven politics of marginalisation where historically and socially marginalised groups continue to be excluded from not only natural resources but many times also from the decision-making process itself (Watts,2015). Such a conception of power, scholars such as Bryant (1998) argue, is tied to “access to, and the use of, diverse environmental resources”, manifesting in contestations, especially in the context of the Global South. In addition to highlighting questions of access and exclusion, such contestations often centre around the disproportionate distribution of environmental harm. In sum while the conception of power has played a central role in the emergence of Political Ecology, definitional parameters as well as forms of power have continued to evolve, moving from conceptions of power defined structurally to forms of power in everyday lives and the effects such power produces.

II. Conflict

Investigation of environmental conflict and contestations have also occupied a significant, yet underrepresented place in Political Ecology research agendas (Le Billon, 2015). However, historically, the tendency to investigate conflict was ceded to other disciplines such as Social Movements Studies in favour of emphasis on other areas of research in Political Ecology such as power. The preoccupation with Marxian Political Economy inspired Political Ecology to privilege an emphasis on understanding power from a structural standpoint, in the process neglecting serious consideration of struggles and conflicts as phenomena of study in themselves. As Watts (1990 as cited in Walker, 2007) points out “there is almost no sense of contest, struggle, and conflict and how the rough and tumble of everyday life shapes human relations with the environment”. Consequently, scholars such as Paul Robbins (2004) have sought to refocus attention to examining conflicts and contestations by pointing to the centrality of an environmental conflict thesis as a manifestation of the political character of nature and natural resources. This political character of nature, Robbins observes is brought to the fore by “increasing scarcities produced through resource enclosure or appropriation by state authorities, private firms, or social elites accelerate conflict between groups (gender, class, or ethnicity)”. This results in situations where certain groups exert control and power over collective resources at the expense of others, creating conditions ripe for conflicts and contestations.

Much of the literature on “politicised nature” (Robbins, 2004) focus arose in Asia, African and Latin American contexts, against the background of criticisms against modernisation and development theories. Bryant points out that much of the Political Ecology in the ‘third world’ in fact was built over the understanding of how much of the unequal power relationships were grounded in differential access to natural resources and to the conflicts that ensue (R. L. Bryant,

1998). Arturo Escobar (2006) opines that environmental conflicts in the majority of the cases have two factors in common, firstly, “they pit the rich against the poor” and secondly, they invariably involve the questioning of capitalistic economic models on the one hand and some form of mobilization around, or in defence of, local cultures, on the other. Building on dependency theories and world systems theories, scholars such as Escobar sought to draw attention to the centrality of conflict, contestation and struggles as “a prime form and expression of politics.” (Le Billon, 2015). Indeed, much of this scholarship in political-ecological literature focused on contestation and conflict as a *result* of the varied access to resources and to the unequal distribution of power, emphasising a material connotation to the conflict and contestations.

However, Political Ecology has devoted little attention to the strategies and tactics used in the mobilization of conflict situations. The prevailing perspectives of Resource Mobilization Theory (McCarthy & Zald, 1977) and Political Opportunity Structure approach (Gamson & Meyer, 2009) were drawn from Social Movement studies and Mobilisation studies. However, these two approaches have been criticized for a variety of reasons, one of which being the lack of importance given to socio-political contexts in the analysis of conflict. The Contentious Politics approach by McAdam, Tilly and Tarrow was developed as a middle ground between the two opposing theories of mobilization and significantly sought to introduce phenomena usually considered as irrational in terms of mobilization (McAdam and Tarrow, 2004; Tilly and Tarrow, 2015). In the context of this thesis, Chapter 4 approaches the mobilizational aspect of the Vilappilsala conflict from a Contentious Politics framework (developed by McAdam and Tarrow, 2004), Tilly and Tarrow (2015) to examine the strategies and motives for mobilization in the conflict.

Inspired by these debates within Social Movement research and Mobilisation Studies, scholars such as Watts (2003), Walker (2007) argued for Political Ecology (and Urban Political Ecology) to

consider approaches that acknowledge and locate themselves in the broader political environment and provide explanatory tools to Political Ecology. More recently, scholars such as Sarah Moore(2008) in Mexico and Farhana Sultana(2015) in Bangladesh, drawing from Loftus(2012), demonstrate the importance of analysing everyday dimensions of environmental conflicts and contestations by accounting for both rational conflicts i.e., conflicts that are based on issues such as economy, livelihoods etc. and irrational conflicts i.e., conflicts that involve emotions, and culture at their centre as significant for analysis.

To sum, while conflict had been one of the most enduring themes in Political Ecology, recent scholarship has renewed its significance. Building upon post-structuralist notions of power, these theorists have highlighted the significance of cross-cutting categories of gender, class, race, and ethnicity to conflicts and contentions.

III. Environmental Justice and Injustice

While power and conflict are significant themes of study in Political Ecology, a third theme of Environmental Justice expresses power imbalances and environmental conflicts. Environmental Justice (EJ), known variously as Environmental racism, Environmental inequality or injustice, has been an important theoretical tradition within social science research in contemporary times (Mohai et al., 2009). Tracing EJ's evolution from several ground-breaking works in the US in terms of the disproportionate distribution of detrimental effects of industrialisation on communities of colour, works such as 1987 *Toxic Wastes and Race in the United States* by the United Church of Christ(UCC)(Cole & Foster, 2001) and *Dumping in the Dixie*(Bullard, 1990) laid the foundation for much of research practice of Environmental Justice in Political Ecology.

Holifield et al (2018)., explicitly connects Political Ecology and Environmental Justice strands in

highlighting their interdisciplinary sources and wide-reaching scope. Holifield et al., (2018) also observe that the vantage point of Environmental Injustice centred around concerns of pollution and disproportionate distribution of environmental ‘bads’ to marginalized groups, characterized as miscarriages of justice has been popular in Political Ecology. For instance, David Pellow’s *Garbage Wars* (2004) illustrated how environmental injustice disproportionately affects²⁴ the most marginalized in society and underscores the conflicts that ensued. Therefore, concerns of marginalization and identity have played an important role in Political Ecology.

Literature intersecting Environmental justice and Political Ecology was further strengthened by scholars such as David Schlosberg. Schlosberg (1999) extends debates concerning marginalisation by drawing attention to the complexity of the concept of justice. Schlosberg(1999) pointed out that the concept of justice²⁵ in Environmental Justice claims is not monolithic rather it is comprised of three dimensions, namely(1) Distributional Justice, (2) Procedural Justice and (3) Recognitional Justice. According to Schlosberg (1999) these three dimensions of Environmental Justice provide a nuanced understanding of marginalization and environmental injustice/justice claims.

In sum Environmental Justice and Political Ecology literature intersect in their strong commitment to social justice by shining light on the differential effects of environmental burdens placed upon marginalized communities (Bridge et al.,2015).

24 Especially in terms of how the detrimental effects of waste and its management in Chicago are primarily concentrated around communities of colour and communities of lower income. For more see, D.Pellow (2004).

25 Drawing from the works of scholars such as Kant, Sen, Nussbaum and later Rawls, the debates that were underway in academia with regards to agency, capabilities in development studies sought to understand and in many ways redefine the concept Justice in Social sciences, especially in Development Studies.

IV. Scale

Linked with Political Ecology's pluralistic origins, the influence of human geographical concepts such as scale has been vital in understanding human-nature relationships. However, the usage of scale in Political Ecology has evolved. For instance, Blaikie and Brookfield's conception of political ecological approach considered the concept of scale as integral (Blaikie and Brookfield 1987: 17, as cited in Neumann, 2009). However, scale, in this instance was approached as a series of nested hierarchical entities, representing opportunities for exerting power (Blaikie and Brookfield, 1987 as cited in Rangan & Kull, 2009). In other words, scale for Blaikie and Brookfield represented registers along which power is exercised by varying actors from the local to the global, from site-specific to administrative centres of power such as national capitals (Zimmerer and Bassett, 2003 as cited in Rangan & Kull, 2009).

Contemporary engagement with scale has both built upon and critiqued this conception of scale. Alternative perspectives critiquing scale as nested entities emphasise the socially constructed nature of scale by arguing that scale is "the product of social relationships that assume different configurations under changing conditions", (Zimmerer and Bassett 2003 as cited in Rangan & Kull, 2009). Robbins (2004) expands on this debate by arguing for looking at scales as social and politically constructed networks. Drawing primarily from Latour's work on Actor-Network Theory (ANT), Robbins argues that "actor-network theory is particularly useful for political ecology because it 'paints a picture of a produced world, where politics hold sway, but which involves global migrants, both human and non-human, who produce and consume landscapes and knowledge, remaking the world as they go' (Robbins 2004; Rangan and Kull, 2009).

Furthermore, emerging literature in Political Ecology has looked to analyse processes that cross several scales, (Peet & Watts, 2004). These 'cross-scale linkages' are based on a dynamic

interaction between local and the global, wherein relationships and processes that may not necessarily be proximal to the ecological phenomenon under study, are seen as connected and related (Paulson et al.,2003). By looking at scale from such a relational perspective, these scholars indicate that the processes and phenomena are not necessarily linked to geographical registers but were contingent on historical and socio-political linkages (Paulson and Gezon,2005 as cited in Rangan and Kull,2009).

Together these themes represent the broad theoretical and research approaches in Political Ecology literature. In addressing environmental challenges, the literature attempts to provide a broad ranging understanding of human-nature relationship, by acknowledging and including power dynamics and social inequalities, transcending disciplinary boundaries. Despite the effort to provide holistic analyses, criticisms have been raised by several scholars about the cases being located in rural contexts²⁶, lending a ‘rural bias’ to the discipline.

The following section therefore, addresses the formation of Urban Political Ecology²⁷ as an effort to re-examine the research agenda in Political Ecology as a response to this rural bias and beyond its then-prevalent rural focus.

26 One of the major reasoning for this supposed rural bias is put aptly by Tsing and later, Brosius “Because natural resource stocks are often found at the margins of dense human settlements, early ethnographic work associated with political ecology was largely located in rural or agrarian settings” (Tsing, 1993; Brosius 1999 as cited in Radmacher 2015)

27 For more see special issue curated by Erik Swyngedouw and Nik Heynen in *Antipode* in 2003. Also see R.Keil (2003) for a detailed discussion on the origins of UPE.

3. Urban Political Ecology

Anna Zimmer and others (2018) argue that traditionally “in Political Ecology, cities did not appear as more than sites of political-economic decision-making that affected environmental degradation, resource access, and control in rural areas”. Political Ecologists were focused on land use and agrarian changes and consequently scholars such as Swyngedouw and Zimmer have argued that research in Political Ecology steered towards rural areas. In fact, scholars as early as the beginning of the 21st century, such as Freidberg (2001, as cited in Bartels et.al,2020) questioned the apparent lack of urban and periurban (Freidberg uses the term hinterlands) in Political Ecological analyses. However, the application of PE in urban settings also brought about significant theoretical changes. Swyngedouw, Kaika and Heynen (2006) while steering the critical focus of PE, focus on the production of the urban. The authors in this theorization, draw their inspiration from Marxist geography and the works of Henri Lefebvre, where the city and nature are seen as coproduced through socially mediated processes. These coproduced ‘second natures’ were read in opposition to the traditional Marxist conception of the adversarial relationship between the urban and nature²⁸(Cornea, 2019).The UPE offshoot was in many ways extending Political Ecological research on urban and environment “by placing social power at the centre of its conceptual frame” (Gandy, 2022).

To understand the city “as both one of the driving forces behind many environmental issues and as the place where socio-environmental problems are experienced most acutely, there is a need to

28 One of the corner stones of the modern scientific enterprise was the erection of a false separation between natural and human processes. Indeed, the assumption that with scientific method it is possible to ‘subjugate’ nature is one that undergirds much of urban planning philosophy.

excavate the processes of urbanisation as one of the central concerns of an evolving urban political ecology” (Swyngedouw et.al, 2006). Much of the initial scholarship in UPE draws on Lefebvre’s work on “second natures”²⁹, and considers creation of the urban as a function of repurposing nature. In other words, the fundamental assumption is that nature is reshaped to produce the city, toward the construction of the city as a “second nature”.

The city is then produced through socially mediated processes that shape and reshape nature to suit the production of the urban. These processes Zimmer (2010) Zimmer et al., (2018) and Cornea(2019), note has been reliant on “the transformation of biophysical matter into commodities and tracing the flows of these commodities into and through cities, understood as a metabolic process”. This metabolic configuration has been a persistent theme within UPE which involves “an elaboration of anti-essentialist materialisms that replaced dualistic conceptions of nature with a variety of relational and hybrid configurations; an emphasis on neo-Marxian interpretations of urban metabolism and the circulatory dynamics of capital and nature, reflected in studies of water, waste, air, and other life-sustaining components of the urban arena ...” (Gandy, 2004) .In other words, Gandy is reflecting on the endeavours by UPE to launch a relook at the dichotomous relationship between the city and nature by reconceptualizing this relationship in terms of metabolism. Veronesi (2016) points out that the metaphor of metabolism has been highly influential in the discipline of Urban Planning which characterised the interaction of environment and the city in terms of several processes, “whereby material and energy flows are studied in order

29 Henri Lefebvre’s (1976) notion of ‘Second Nature’ describes the production of the urban in simultaneity with the destruction of nature. Lefebvre further argues that in this destruction of nature, there is a reconstruction of a “second nature” in terms of the urban. The urban then is “anti-nature or non-nature and yet second nature” at the same time. Lefebvre here is alluding to urbanisation processes’ tendencies to produce the urban by externalizing nature. While, on the one hand, the inherent urge of the capitalist city to “destroy nature” is powerful, it is also beholden to the fundamental necessity of capitalism to commodify nature to further its expansion. For more see Janzen (2002)

to design technological solutions to minimize resource inefficiency (Rapoport, 2011 as cited in Veronesi, 2016)”. The emphasis on flows of energy and materials also comes with it a ‘normative objective’ to increase the economic efficiency of the system as a whole. This is most evident in terms of phenomena such as solid waste, polluted air, urban drinking water, waste water, which Zimmer(2010) terms are emblematic of UPE’s consideration of hybrids. For instance, solid waste in the city is a phenomenon that is ubiquitous, indeed one is “...constantly confronted by waste” Thompson, (2015). Waste generation is conventionally considered a function of urbanisation and the economic development and accompanying population growth(Asia Research Institute, 2011).Waste, however, is also a political entity, as “how and where it is handled and disposed of can be part of the strategies of political actors” (Moore, 2009 as cited in Cornea et al., 2017). With increasing consumption, the generation of waste has also increased. Many experts, especially urban planning, point out that Solid Waste Management (SWM) as an activity is “a critical element towards sustainable metropolitan development” (Joshi & Ahmed, 2016), the lack of which can pose severe challenges to sustainable urban growth. Veronesi (2016) classifies such perspectives as ‘functionalist’, where the city is viewed as an ecosystem in which “the city [is viewed] simultaneously as a system and as a natural entity” (Marcotullio and Boyle, 2003 as cited in Veronesi, 2016).Gandy (2022) notes that in the contemporary city, “...urban infrastructure has often been conceived as a functional lattice of different elements which corresponds to the different organs of the human body”, often presented as a whole-vs- sum-of-parts paradigm.

However, Gandy also points out that the functionalist approach to the city “raises a series of analytical dilemmas concerning the intersection between social and bio-physical dimensions to urban space” (Gandy,2004). Recent scholarship in UPE has, however, sought to move away from the functionalist perspective to accommodate more heterodox approaches. Several scholars within

Urban Political Ecology, therefore, privilege a dialectical³⁰ approach to guard against “the persistence of organicist metaphors for the understanding of the flows and networks that underpin the development of cities” (Gandy, 2004).

A dialectical approach would, Veronesi(2016) argues, seek to recognise the constructed nature of the city and socio-political processes mediated through historical processes. For example, Jenia Mukherjee(2022) in her study of East Kolkata Wetlands (EKW) argues for a similar approach (that they term as Historical Urban Political Ecology or HUPE). Mukherjee’s HUPE approach can be best described as one of the many approaches within UPE that acknowledges and privileges “historical scales” of analysis. Mukherjee points out that in doing so, the researcher is enabled to “unravel socio-ecological configurations through the examination of long-term systemic conditions and resource allocation or accumulation processes of the past” (Mukherjee,2022). While HUPE represents one of the many approaches in UPE that calls into question the emphasis on metabolic metaphors, the approach hinges on archival sources for the reconstruction of historically linked scales and therefore is limited to those instances where availability of archival sources are assured.

A dialectical approach³¹ is also a critique of analyses that are anchored in the territorial conception of cities, often termed as ‘Methodological Cityism’(Angelo & Wachsmuth, 2015). Gandy (2022) points out that one of the core questions of what constitutes a city has often been circumvented in the scholarship of UPE. Brenner observes a “deep confusion regarding the specificity of the urban

30 Gandy here notes that “the term dialectical is used here to denote a mutually constitutive conception of relations between nature and culture in urban space: nature is not conceived as an external blueprint or template but as an integral dimension to the urban process which is itself transformed in the process to produce a hybridized and historically contingent interaction between social and bio-physical system.”

31 For more on this discussion see the works of Scholars such as Lawhon et.al (2014); Bartels et al., (2020);Myers(2021)

itself” (Brenner 2013 as cited in Gandy 2022). Angelo and Wachsmuth (2015) submit that this confusion can be alleviated by moving beyond territorial conceptions to UPE “not of the city but of Urbanisation”. It is to this idea of UPE of urbanization that I turn my attention next.

4. A more-than-Urban Political Ecology: of the city/in the city?

What constitutes the urban has been ambiguous in UPE. For instance, Swyngedouw has often used interchangeably the concepts of urbanization and the city (Angelo and Wachsmuth,2015). Similarly, Angelo and Wachsmuth(2015) contend that early UPE scholarship focused on understanding hybridity and socionatures ,which resulted in the apparent neglect of what Keil calls a Lefebverian moment; that is, “the realization that what we call “the urban” is a complex, multi-scale and multidimensional process where the general and specific aspects of the human condition meet” (Keil, 2003 as cited in Angelo and Wachsmuth,2015). Scholars such as Keil and Braun (Keil 2003 as cited in Gandy 2022; Braun 2005) argue that conceptualizing urbanisation as a process (or a collection of processes) shifts the locus of research from territorial constraints to examining other ways of analyses such as networks (Keil,2003 as cited in Gandy 2022). Accordingly, Tzaninis and their co-authors (2021) suggest a recalibration of UPE research agenda towards the inclusion of periphery, the proverbial outside to the ‘core’ that is the territorially bounded city, toward a more -than-Urban Political Ecology.

As discussed in Chapter 1, debates regarding the experiential character of urbanisation in the Global South has been gathering momentum in recent times. While discussing urbanization, authors such as Allen(2017), Arku & Marais(2021), Myers(2021),Randolph & Storper(2022), Chakrabarti(2023) ,often describe the processes that encompass urbanisation in terms of transitions, which has variously been characterised as catastrophic, rapid and discontinuous

(Ravetz et al., 2013) and often play out in the periurban³². While Brook & Purushothaman, (2003) point out that while “there is no single satisfactory definition of the word ‘peri-urban’ and different definitions are understood to apply in different circumstances”, there is an opportunity to understand the periurban as a standalone concept. However, displaying a range of characteristics of both urban and rural spaces, periurban spaces are often arenas where the dynamics of urbanization can be seen to manifest (Dupont, 2005).

The three conceptions of the periurban, namely Place, Concept and Process underscore the fact that the periurban does not exist in isolation from the urban or the rural. Scholars such as Marshall et al. (2009) argue for understanding the periurban as “an area of complementariness out of which arise various opportunities and exclusions”. Drawing from the conception of periurban spaces as existing within the larger networks of flows of goods and people, also brings attention to the fact that along with a flow of goods such as food grains, vegetables, milk and other agricultural produce, environmental externalities such wastewater, smoke, fire, often operate across established territorial scales(Karpouzoglou & Zimmer, 2016;McManus, 2021; Mundoli et al., 2022).In other words as Janakarajan(2009) observes, the interconnected nature of the urban and the periurban can also entail flows of ‘bads’, leading to periurban spaces becoming sites of inequalities, especially in terms of natural resources(Bartels, et.al 2020). For instance, as Narain’s (2014) work in northern India shows, the flows of water and land resources are often diverted to the cities at the behest of the urban elite to the detriment of the periurban poor. In other instances, similar case studies(Truelove, 2011; Vij & Narain, 2016; Karpouzoglou & Zimmer, 2016) have

32 Narain and others (2013) point out periurban has been defined by scholars in various ways, which they broadly classify into three strands: Place, Concept and Process

demonstrated the precarity associated with periurban spaces in terms of natural resources and environmental bads. Precarious situations such as those aforementioned have often given rise to pushbacks from the periurban. As Tiwari and others argue “in many cities, like Delhi, the rural has been engulfed by the urban but both co-exist, often complementing each other functionally. These cities are also witnessing periurbanization on an unprecedented scale: where rich and poor, modern and agrarian economies, novel and traditional cultures contest for space – and this contest is far from harmonious” (Tiwari et al., 2015). Priya and others(2017) concur with this characterization and further argue that the contestations occur in the periurban and often take the shape of political action and work toward mobilization of social forces.

The case of Vilappilsala, represents one such instance of pushback. India has witnessed several such pushbacks, a study conducted by the Centre for Science and Environment (CSE), a New Delhi-based organisation, points to as many as 79 instances of conflicts, in India, with waste management at their centre (Sambyal & Narain, 2016). Many of these conflicts are between cities and areas located not too far away from the city limits, often acting as its dump yard.

The rising cases of conflicts and resistances staged by many locations in the country can be attributed to a variety of factors such as lack of decision-making and participation as Demaria and Schindler point out was the case in Okhla in Delhi (2016); it can also be traced to socio-cultural connotations of waste. Much like wastewater(Karpouzoglou & Zimmer, 2016) and smoke from bushfires(McManus,2021) waste is a complex and at times ‘fuzzy’³³ entity(Thompson, 2015). Jutta Gutberlet(2018) points out that waste in modern academia is a ‘transversal’ theme, being connected to and therefore affecting multiple facets of life. Sarah Moore (2012) characterises

33 The essence of the argument is that the boundary line between what is considered waste and non-waste is always mobile and therefore difficult to pin down.

waste “as an object of study, waste itself might best be thought of as a parallax object³⁴” (Moore, 2012). Scholars in very many disciplines that have coalesced around the study of discard and in UPE have begun to adopt a more nuanced approach to understanding waste and its place in UPE (Moore, 2012; Millington & Lawhon, 2018). The implication here is that a relational approach or rather a situated approach to understanding waste and UPE in general would provide a more fruitful avenue of enquiry (Lawhon et al., 2014). A Situated UPE can also offer deeper insights into the entangled character of hybrid entities such as waste and socio-political entities such as race, gender and identity (Njeru, 2006). In the case of India, works such as Ranganathan (2014; 2022) and Wittmer (2022) provide a deeper insight into not only the entangled nature of waste and water with that of the processes of urbanisation but also work to highlight the intersectional nature of gender, caste and class. Similarly, Njeru’s (2006) work on plastic waste in Kenya, underscores the conflation of both race and class positionalities as driving forces in the both the utilisation of newer technologies such as plastic but also in terms of the eventual creation of plastic waste. Sarah Hodges (2018) studies similar connection in terms of class and caste dimensions of plastic adoption and later proscription in India.

Drawing from Loftus’ work (2012) authors such as Lawhon et al, (2014) essentially situate their research in the everyday, drawing on the practices of the lifeworlds, in this case that of the periurban. A Situated UPE can provide “bottom-up” (Pieterse, 2008 as cited in Lawhon et al 2014) accounts and insights into the assemblage of processes that urbanisation represents (Angelo and Wachsmuth, 2015). In other words, as these scholars’ works show, in accounting for the intersectionalities in terms of hybrid entities such as waste, water, air -at the heart of UPE research-

34 Drawing from Slavoj Žižek, Moore, describes a parallax object “as that which objects, that which disturbs the smooth running of things” (Žižek, 2006: 17 as cited in Moore, 2012)

one is able to pay greater attention to the processes that make up ‘urban ecologies’ (Lawhon et al, 2014) , besides providing avenues for heterogeneous UPE approaches, which are grounded contextually (Bartels et al. 2020). Therefore Situated Urban Political Ecology (SUPE) approaches everyday processes of urban ecologies in specific geographical, cultural historical and political contexts by assigning significant weightage to local socio-environmental dynamics such as power relations, land use changes and historical antecedents. This provincialized emphasis of SUPE is extended by Bartels et al., (2020) into the study of periurban spaces. Bartels et al., (2020) argue that examining periurban spaces from UPE perspective must be based on a situated approach that applies context specific research in the form of a Situated (Peri)Urban Political Ecology. Together, SUPE and Situated (Peri)Urban Political Ecology contribute to a broader understanding of socio-environmental analyses by promoting context specific approaches to the urban and the periurban.

5. Discussion

Thus far, the discussion in the present chapter has detailed the theoretical outputs that were involved in the career of Political Ecology and Urban Political Ecology; put another way, a theoretical ontology of Political and Urban Political Ecological enterprise. More recent scholarship in PE and UPE (more relevantly) has sought to reframe the debates that were central to the formation of PE and UPE, through three theoretical manoeuvres.

Firstly, as explained earlier in the chapter, a major theoretical move was to discard the centrality (whether explicitly or implicitly) that the territorial city was accorded in early Political Ecology

and Urban Political Ecology theory³⁵. This territorially anchored notion of the urban was articulated in terms of the where the city began and/or ended, the underlying assumption being that by defining the city in terms of territory, the urban was seen as a distinct entity, separate from the rural/countryside. While this line of thought necessarily precludes the role of the rural in the construction of the urban, it also fails to account for the periurban as spaces that are both rural and urban in character. Angelo and Wachsmuth's (2015) warning vis-à-vis methodological cityism assumes much more significance in studying periurban spaces. This is significant in the case of India where scholars such as Denis & Marius-Gnanou, (2011) point out due to the prevalence of Census definitions, much academic literature on the urban have been anchored in territorial registers. For example, studies such as that of Singh et al., (2018), Jain et al., (2023) continue to rely on established territorial demarcations of the urban and the non-urban. Consequently, the periurban is either folded into the urban or rural and escapes consideration.

A second theoretical move emerges by following the call to move beyond territorial confines-as a register of analysis- reveals how hybrid entities such as waste, water, air often buck territorial limitations and are often transboundary in nature. Scholars, espousing such as view, argue that urbanisation does not stop at city limits, rather, they point out that spaces such as urban, rural and periurban have significant roles to play in the process of urbanisation. For instance, Hoffmann et

35 Nik Heynen divides the UPE research enterprise into two waves, the former stretching from UPE's inception to the mid 2000s, characterised by a clear neo-Marxian bent: focusing on larger structures and broader phenomena. The latter wave, Heynen argues, draws from poststructuralist and de-colonial scholarship, moving the locus of analysis to the local and every day. Scholars in this 'wave' have problematized the long held definitions of city and countryside, along with emphasising the experiential character of the urban as an organizing principle for analyses. For more see, N. Heynen (2014)

al.,(2023)³⁶ use the examples of periurban dairy farming in Bengaluru, India and periurban animal husbandry in Accra, Ghana to showcase the significance of activities located in periurban spaces such as agriculture and waste management to the urban.

A third theoretical strand draws on post-colonial scholarship and an emerging corpus of work in southern urban theory where, scholars such as Lawhon et al., (2014) argue for provincialized and situated analyses that emphasise a contextual and grounded approach. Such an approach has been useful in uncovering the experience of urbanisation as seen through the lens of communities in the Global South especially in terms of urban planning and policy (De Satgé & Watson, 2018; Chiu, 2020). To put succinctly scholars such as Myers (2021) and Arku and Marais (2021) argue for situating analyses in the everyday lives and lived experiences of communities.

Where research had previously focused on understanding periurban spaces as distinct entities, Bartels et al., (2020) argue that the time has come to understand periurban spaces in relation to the urban and the rural. To this end, Bartels et al., (2020) propose situating analyses of periurban spaces and suggest a ‘Situating (peri)urban Political Ecology’, as an extension of Situating Urban Political Ecology. Initial efforts in this direction are already underway. For example, Jenia Mukherjee melds UPE’s critical research to Environmental History, in examining EKW through a nuanced and contextualised grounded lens. The concept of historical scales in UPE is an approach that has the potential to aid in further research in UPE and in understanding periurban spaces. In other words, while there has been much advancement in terms of Urban Political Ecology, research such as Bartels et al., (2020); Mukherjee (2022) point to the challenges that UPE would face in

36 For example, Hoffmann and their co-authors point out that activities that were traditionally considered rural such as dairy farming and animal husbandry are in fact rururban(their term for periurban)phenomena. In turn these phenomena connect the urban and rural in way that transcend the established territorial demarcations. For more see, E.Hoffmann et al.,(2023).

terms of adopting heterodox approaches and consequently, in expanding its research agenda.

6. Conclusion

By grounding the process of situating the periurban in post-colonial scholarship this thesis aims to draw on scholarship of Lawhon et al., (2014), Karpouzoglou & Zimmer(2016) ,Cornea et al., (2017) Bartels et.al (2020),Gandy (2022) who all advance research agendas for UPE beyond its current ‘territorial confines’ and towards further developing situated urban political ecologies of periurban spaces. The present thesis also espouses this approach and argues for understanding the situated experiences of processes such as urbanisation in much more granular detail. In addition to capturing contextuality, a situated approach must also engage with the manifestation of phenomena along several scales. The following chapter (Chapter 3) outlines a methodological framework that envisages to strike a balance between a local and granular focus with that of broader, global phenomenon orientation.

CHAPTER 3

Methods and Methodology

1. Introduction

The preceding chapter rationalized the adoption of Situated Urban Political Ecology, a framework that is contextually situated and is provincialized³⁷. In this chapter therefore, I detail the methods and methodology adopted in this research.

P. R. Neumann, (2009) notes that studies of Political Ecology (by extension Urban Political Ecology) include a range of methodological approaches and practices, “multiscalar analysis, political-economic analysis, historical analysis, ethnography, discourse analysis, and ecological field studies”. Paul Robbins(2012) references the plurality of the Political Ecological enterprise by conceiving Political Ecology as a “community of practice” that is centred around a “certain kind of text”. That is to say that PE represented an intellectual endeavour wherein scholars (from different disciplines) addressed “the condition and change of social/environmental systems, with explicit consideration of relations of power” (Robbins,2012) . It was therefore, not pursued as a purely methodological endeavour. Similarly, Anthony Bebbington (2011 as cited in Tetreault, 2017) likens Political Ecology (and UPE) to an umbrella approach wherein a multitude of “traditions and lines of political and ecological research...”coexist. Notwithstanding the diversity

37 Provincializing here indicates the intellectual activity of recognition of the power potential of knowledge, its creation, dissemination and production. The intent behind provincializing an approach would serve to significantly, acknowledge the differences in power at multiple levels of the social milieu, it would also strive to move away from universalizing tendencies that scholars from the global south have highlighted. For more see M.Burawoy,(1998) and D.Chakrabarty(2008)

in research approaches, it is apparent even at a cursory glance that much of Political Ecology's research focus is on the local. For instance, Benjaminsen and Svarstad(2021)defend the reliance on the 'local' as a useful point of departure to identify the influence of actors and processes on interactions across space and scale. Similarly, Blaikie and Brookfield's(1987) conception of Political Ecology envisage a 'regional' endeavour. Little(2006)advocates for the recognition of regional foci of Political Ecological research agenda, which poses advantages to the researcher looking to unearth the socio-political networks in terms of providing a “ strategic delimitation to explore these relations, since it offers insights not necessarily revealed in studies that focus on other levels”.

Therefore, in PE studies the centrality has been of revealing numerous interactions around the 'event', be it by emphasising the regional or as some term it : fetishizing the local(Vayda & Walters, 1999).Cornelia Helmcke (2022)argues that it is for this very reason that much of the literature in Political Ecology (and Urban Political Ecology) is drawn from a foundation of case studies; indeed the case study method is considered “a sort of political ecological thick description” (Peets and Watts 1996 as cited in Helmcke, 2022). An emphasis on the 'case' in Political Ecological research, therefore allows for including a range of perspectives in answering questions that concern human-environment interactions, political connotations of environmental conflict, and the construction of nature across space and scale.

A listing of PE and UPE research is given in Table 1, indicating a preference for case studies in research studies.

Sr No.	Authors	Year	Country
1	Watts	1983	Nigeria
2	Bunker	1984	Brazil
3	Bassett	1988	Ivory coast
4	Peluso	1992	Indonesia
5	Neumann	1992	South Africa
6	Swyngedouw	1995	Ecuador
7	Rasul	2007	Bangladesh
8	Myers	2008	Tanzania
9	Doolittle	2010	Malaysia
10	Benjaminsen, Aune & Sidibé	2010	Mali
11	Leonard	2012	South Africa
12	Cavanagh & Benjaminsen	2014	Uganda
13	Cornea, Véron and Zimmer	2017	India
14	Dunlap	2018	Mexico
15	Shah & Harris	2021	India
16	Purwins	2022	Ghana

Table 1. An indicative list of Political Ecology research relying on case studies.

Source: compiled by
the Author (2023)

A case study method, in this context, is a guiding technique which assists to locate the enquiry within a specific socio-environmental conflict. A case study-utilising a qualitative research paradigm- is a fruitful method to capture the context of the conflict, the strategies, opinions, attitudes, knowledge systems and spatialities; in short, the socio-cultural facets of the conflict

event. The case study method can also assist in delving into the motivations and meaning construction employed in the lead up to, during, and aftermath of a conflict by capturing experiences, both at the individual and at the community level. Bringing an interpretivist stance to bear to a case allows to unpack the various relationships and networks that have manifested in this case. That is to say that, an interpretative stance of the researcher would help to peel back the layers of field and its realities, between several levels of actors and ‘stakeholders’³⁸ that permeate environmental situations of politics, conflict, and mediation; as well as in connecting this struggle to broader theoretical moorings. In choosing the case study as a basic research method, a researcher is able to move across scales-of analyses, from local to the global or vice-versa- a point advocated by Dianne Rocheleau(2008). Furthermore, Rocheleau proposes that Political Ecological methods should be able to pay attention to the interconnected nature of individuals, communities and institutions by “ weaving chain of explanations into webs of relations” (Rocheleau, 2008).A chain of explanation, points out Rocheleau, would enable the researcher to address the criticism of fetishism of the local by accounting for phenomena that are global. In fact, Rocheleau’s emphasis on interpreting the webs of relations and causal chains is formalized in Michael Burawoy’s conception of the ‘Extended Case Study Method’ (ECM)(Burawoy, 1998).The focus of the thesis is to examine interactions between macro-level processes such as national policies and legislations framed in regards to waste management, disposal and urbanisation in India within the larger social, historic, economic and political contexts of Vilappilsala and Thiruvananthapuram. Therefore, I adapted Burawoy’s conception of the Extended Case study Method to examine the Vilappilsala conflict.

38 Fortun refers to stakeholders as ,“groups of people who have a stake in decisions to be made by corporations, government agencies, or other organisational bodies within which decisions by a few people can affect many”. K.Fortun(2001)

Thus far, the centrality of case study in Political Ecological is established. While being a prevalent method in PE and UPE research, case study research (as it has been practiced) have been criticized for fetishizing the ‘local’ and therefore calls to expand the scope of analysis has been articulated by scholars such as Rocheleau. In this thesis I argue for adapting Michael Burawoy’s Extended Case Study Method to examine local and global phenomena in Urban Political Ecology research. The following section examines the extension of the case study method and its potential significance in Urban Political Ecology.

2. The Case study method and its extension

Given the centrality of case studies in PE and UPE research endeavours, in the section below I detail in brief the ‘definition’ of the case. Case studies defy generalisation, as they have been applied in numerous ways in different research designs. Although it has been argued by Ragin (1992) that a case “can be an intrinsically interesting historical or cultural entity in its own right”. Snow & Trom (2002) delineate four considerations that in part account for case study strategies. These include:

- 1) Case studies are bounded in time and space (Ragin,1992, Sjoberg et al.,1991 as cited in Snow & Trom,2002), making all results of such studies ‘spatially and temporally contingent’.
- 2) The primary phenomenon investigated in most studies can be classified as “a member of a larger set of broadly defined objects” (Ragin 1992; Sjoberg et al. 1991 as cited in Snow & Trom,2002)
- 3) The object of study is oftentimes, “an instance of an important theoretical concept or process” (Ragin,1992).

- 4) The focus of inquiry is “an intrinsically interesting historical or cultural entity in its own right” (Ragin 1992: 2; Sjoberg et al. 1991: 54-55 as cited in Snow & Trom, 2002).

The multiple considerations in the development of cases can potentially yield different types of cases. Ragin (1992), in particular, comes up with a typology of cases that can aid the researcher in determining the nature of the case under consideration and construction based on a conceptual dichotomy of cases as empirical units and cases as theoretical constructs. Ragin’s dichotomy of cases serves to frame the objective as well as the scope of the cases under consideration. Table 2 represents Ragin’s approach to classifying cases.

Understanding of Cases	Case conceptions	
	<i>Specific</i>	<i>General</i>
As empirical Units	Cases are found	Cases are objects
As theoretical constructs	Cases are made	Cases are conventions

Table 2. Conceptual typology of “What is a case?”

Source: Ragin and Becker(1992)

Pivotal in a case study is framing; the process of “casing” or case-making. Framing of a case often depend on pragmatic factors of goals and feasibility and so on (Plows, 2008). But casing can also come about by asking the question of “why”. Tavory & Timmermans (2009) portray this process as asking the “generic question of ‘what is the study a case of?’ and ... determining what kind of sociological case one has or establishing the sociological properties and boundaries of the situation at hand”. Yin however, argues that approximately five factors (given in Fig.3) determine the

process of casing or the ‘rationale of case selection’, which in turn influences the manner of the case being constructed. There are five rationales identified by Yin(2014) of a single case, which are as follows:

- 1) Selecting a critical case. Here, critical would be crucial to theory or theoretical propositions (again, note the analogy to the critical experiment). A single critical case can represent significant contribution to knowledge and theory building by confirming, challenging, or extending the theory.
- 2) Extreme case. A case that represents an extreme case or an unusual case by deviating from theoretical norms or even everyday occurrences.
- 3) Common case is the third rationale for single case. The objective is to capture the circumstances and conditions of the everyday situation. This way lessons about the social processes may be related to some theoretical interest.
- 4) Revelatory case. In this situation a researcher may observe and analyse a phenomenon that was hitherto inaccessible to social science inquiry.
- 5) the final rationale for a single-case study is the longitudinal case. The same single case is investigated over two or more different points in time.

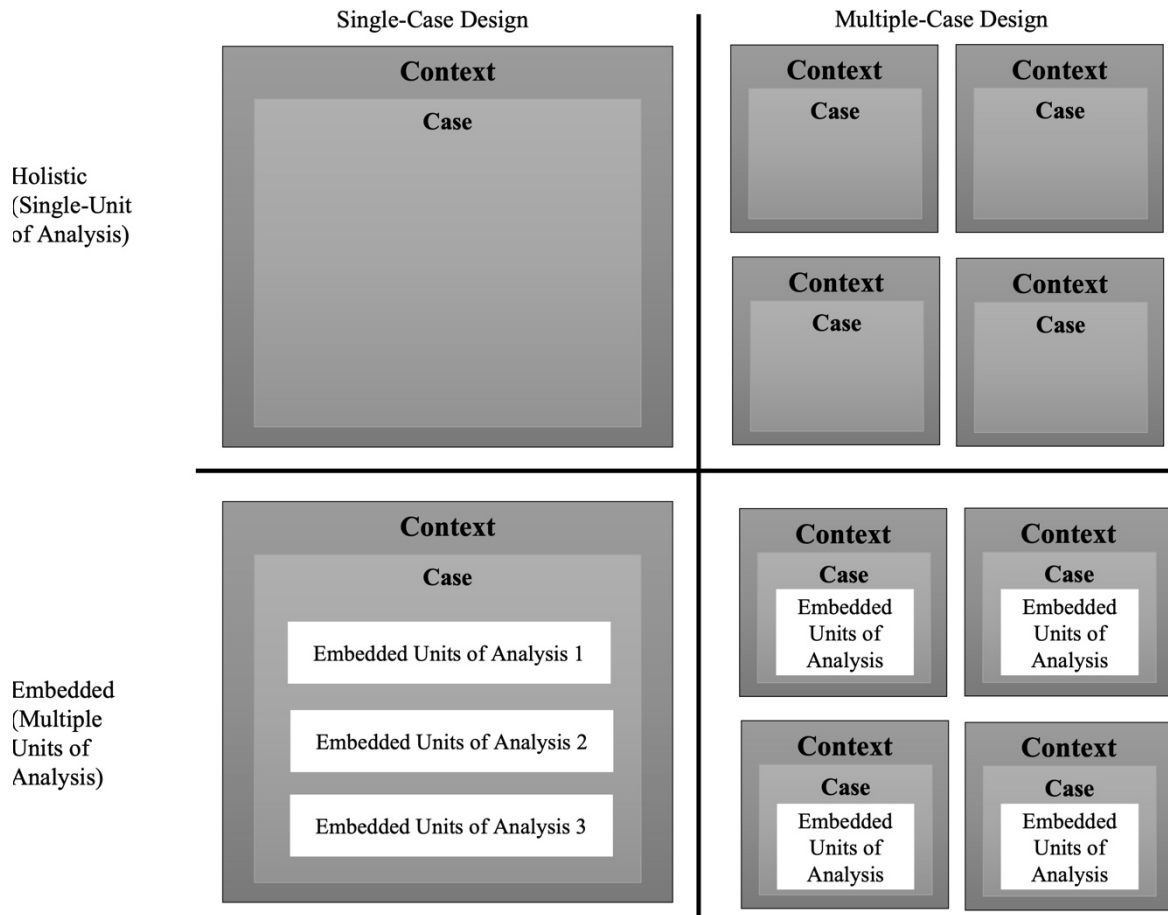


Figure 3. Basic types of Case research designs. Source: Yin (2014)

In terms of the casing, the “why” question can also be answered by considering the epistemological mooring of the case study. In other words, what is the intended contribution of the case study in terms of the theory being framed?. An Extended Case study approach can help to further the cause of theory-making by shifting the focus of case study methods in PE and UPE from being “method of apt illustration³⁹” to that of the “extended case”(Evens & Handelman, 2005). Drawing from

39 According to Gluckmann the practice of “Apt illustration” refers to the usage of examples of ethnographic description rarely related to each other. Speaking in the background of post-war anthropology, Gluckmann critiques the practice of using

Gluckmann's criticism of structural-functionalism in anthropology (Gluckmann, 1961 as cited in Handelman, 2005), Burawoy (2009) points out that ECM links the micro and macro. Therefore, ECM shows that connections between phenomena not readily connected to the immediate case can be taken into account and used to understand the particularity of a case; in effect uncovering the 'webs of relation' that Rocheleau (2008) refers to. In this manner one overcomes the criticism of ECM being "blinded by structural-functionalism" that neglected to pursue anomalous instances in terms of cases (Tavory & Timmermans, 2009). To arrive at this point an understanding of two decades of ECM is significant⁴⁰.

ECM found a fresh lease of life in sociologist Michael Burawoy's work in the 1990s. Burawoy, through his work in Zambia, reconceptualised the ECM to "expand its temporal and spatial scope and explicitly privilege social structure" (Tavory & Timmermans, 2009). Burawoy's (1998; 2009) critique of existing ethnographic techniques and qualitative methods in general was based on prevailing perspectives of conducting ethnographies that tended to be abstract in their connection to larger processes. To this end Burawoy sought to steer away from the 'obsessive presentism' of ethnography and its "abstraction from history, a repression of the past" to a 'reflexive ethnography', one that moves beyond "conventional oppositions: participant and observer, micro and macro, history and sociology, theoretical tradition and empirical research". While similar questions were raised through the research of van Velsen (1960, as cited in Burawoy, 2009) and

such ethnographic examples to buttresses and embellish, "generalizations reached deductively or inductively". For more see, M. Gluckmann (1961)

40 Extended Case study Method traces its lineage to British traditions of Anthropology, -specifically to the Manchester School and scholars such as Jupp Van Velsen and Max Gluckman- and attempted to build on the prevailing structural-functional theories to produce Extended Case methods and others such as Situational Analysis. The avowed objective of van Velsen and Gluckman's version of the ECM was that "social researchers should thus document a series of disputes, ruptures, and norm conflicts and record as much of the total context as possible. Theories could then be built by stringing together similar case reports of conflicts over time" (Tavory & Timmermans, 2009)

Gluckman(1967, as cited in Glaeser, 2005), there remained a gap as to why this connection to larger processes was significant ,which remained unanswered. Following Mitchell (1982 as cited in Tavory & Timmermans, 2009), Burawoy sought to address this gap by arguing for situating cases within theoretical principles that are sensitive to spatial and temporal factors. Simply put, while earlier scholars such as Gluckman and van Velsen, emphasised the need to extend the case outward, Mitchell and later Burawoy, sought to ground this extension in terms of theoretical principles, by accounting for both temporal(historical) and spatial phenomena. Furthermore, Burawoy’s reformulation of the ECM grounds itself in a reflexive model of science. Building on ethnography’s emphasis on the ‘micro’, Burawoy exhorts the researcher “to move to the macro... to connect the present to the past in anticipation of the future, all by building on pre-existing theory. Where the researcher does not “deny or repress the antinomies” in the way that Positivist science does; instead, using them as “indispensable support for social research”(Burawoy,1998). This reconfiguration of the organising principles of the ECM basically leads the researcher to an “abductive epistemological orientation”⁴¹ (Kimball, 2019). Similarly, Noel Castree points out that in fields such as Human Geography the usage of case studies has tended to follow one of two opposing views; of micro-focused or “singular” case studies or the generalizable macro-focused case studies⁴². Moreover, Castree(2005) points out focusing on ideographic or nomothetic approaches in case studies can hinder ‘wider’ insights in terms of the phenomena in question. Consequently, Castree argues that acknowledging and understanding the constitutive effects of

41 In abduction, the simultaneous utilisation of inductive reasoning (the use of specific observations to produce abstract conclusions) and deductive reasoning (the use of abstract rules to generate specific conclusions) allows for the development of theories that are well-supported by both prior scholars and empirical observation.

42 Castree argues that these case studies reflect the debates between nomothetic and idiographic ontologies that underpin most of the research in social sciences. For more see N.Castree (2005)

geographical difference is not only paramount but also signifies the consideration of “ processes, rules and regulations that are ‘stretched’ over wide spans of space and time” (Castree, 2005). In other words, like Burawoy, Castree indicates necessity of approaching case studies from both contextual as well as in terms of wider phenomena, over space and time, that would not only show diversity but also that such diversity arises out of “mutiscaled relations”(Castree,2005).

In the context of Political Ecology and Urban Political Ecology, Helmcke (2022) observes that Political Ecological research while generally dependent on case study methods employ such methods without defining “as to why and how a case was chosen, how it matters, what it exemplifies, or how it is relatable to other cases or processes”. The result of such an approach being the production of studies which, while raising significant points, fails to work toward a coherent set of concepts or towards theorisation. In recent years, however, debates in Political Ecology as well as Urban Political Ecology has explored different ways in which both PE and UPE can adopt methodologies that enable theorisation. Karen Coelho(2018) has argued that a PE and UPE lens would not only lead the researcher to question to *a priori* claims of nature and cities but also view nature⁴³ and city as mutually constitutive entities. Coelho (2018)further, operationalises this conception though a series of “five intersecting rubrics”, namely:

43 Nature, Coelho argues here is perceived and operates on two separate registers; firstly, As an empirical force, and secondly as “complex of socially constructed values: resource, factor of production, or object of consumption”

1. Hybridity:	“Urban spaces and systems are deeply hybrid productions”(Coelho,2018). Coelho points out that cities are assemblages of “on the one hand, projects of socio-spatial engineering, capital accumulation, and advanced consumption, and on the other hand by nature⁴⁴”. This newly created ‘second nature’ challenges the previously held registers of boundaries (physical and otherwise), and represents the constantly shifting Urban.
2. Boundaries	The city is being constantly being made and remade entailing, “an ongoing drawing and redrawing of boundaries and categories of its component entities...”(Coelho,2018). In other words, the shifting of boundaries challenges what is considered urban. In this process non-urban spaces are created, destroyed and are sometimes co-opted. The blurring of boundaries in these peri-urban areas is significant in a processual understanding of urbanisation.
3. Histories	The city is historically constructed, the ‘socionature’ of the city being “conceived and valorised through shifting historical frameworks” (Coelho,2018). In other words, the city as an entity is not only constructed by the visions of the future but also by focusing on the discourses of the past. Furthermore, buried under the city’s conflicting visions and experiences lie histories of relationships and of value that is most evident in the shifting usages of land and built environment.
4. Value	The transformation of nature, i.e., “land, water, air, human and non-human entities” creates and destroys value especially in terms of the city, which is historically constructed . In other words, the value produced is not only spatially contingent, but it also changes across time and can “disrupt urban nature or dismantle certain histories and legacies of urbanisation” (Coelho, 2018) .
5. Peripheries	As a consequence of this rapidly shifting “dialectics of devalorization and revalorisation”, the city often expands to newer territories. The urban peripheries and metropolitan fringes have emerged as essential sites of urbanisation and of the five rubrics that Coelho has employed.

Table 3. Five intersecting rubrics in UPE

Source: Coelho (2018)

In the case of Vilappilsala, drawing on Coelho’s and other scholars’ works, I argue that an ECM approach is well equipped to consider not only the hybrid characteristics of city and nature but also to examine the periurban. Furthermore, I argue that an Extended Case Method is also useful

to move beyond the critique of methodological cityism that Angelo & Wachsmuth(2015) and Connolly(2018) advance and contribute towards broadening the scope of investigation by moving beyond territorial confines of the city and non-city and considering the urban and the periurban as a regional unit of analysis. In terms of theorisation, the five rubrics employed by Coelho (in table 3) would then serve to nudge the researcher to explore concepts and methods that acknowledge the mutually constitutive relationship not only between the city and nature but also provide insights into the relationship of the city and non-city.

3. Locating the thesis: the Vilappilsala Conflict

For the purpose of my research, I focused on selecting the case of Vilappilsala. The village of Vilappilsala -which forms a part of the larger Vilappil Grama Panchayath area- is located approximately 15 KM from the centre of Thiruvananthapuram, in Kerala. In the following section I discuss the field site as well as the processes of site selection to address the research problem of the present thesis.

3.1.Entering the field

As Paulson, Geezon and Watts(2003) observe much of the contemporary research in Political Ecology (and UPE) have often centred around local struggles which have successfully served to highlight the political character of nature-society relationship. These struggles have often acted as entry points for Political Ecological research as they represent points of rupture in underlying tensions, with respect to ecological, political, social and cultural impacts of resource extraction activities(Banerjee et al., 2023). Indeed, when I set out to write this thesis, the Vilappilsala conflict appeared to be trailing off in its intensity, with the National Green Tribunal (Chennai bench) pronouncing its judgement in 2015 and the Thiruvananthapuram Municipal Corporation passing a resolution formally abandoning the factory at Vilappilsala in 2016,bringing a semblance of closure

to the matter. However, it can be argued that struggles such as that of Vilappilsala can seldom be considered ‘over’ as Kim Fortun’s study on the Bhopal gas tragedy showcases, they can continue to be implicitly and (sometime) explicitly influence the lives of concerned stakeholders (Fortun, 2001) .

In approaching the case of Vilappilsala, I was presented with a unique task of parsing together instances, events and occurrences located in the not-too-distant past. In selecting the case of Vilappilsala, an important consideration was to understand how to operationalise the temporally and spatially contingent nature of both the conflict as well as the periurban space itself. One of the ways the study tackled this issue was to first begin with the latest episode of the conflict and then proceed to reconstruct earlier episode(s). In other words, all efforts were taken to view the latest phase i.e., 2011-12 as a part of a pre-existing and broader conflict in Vilappilsala.

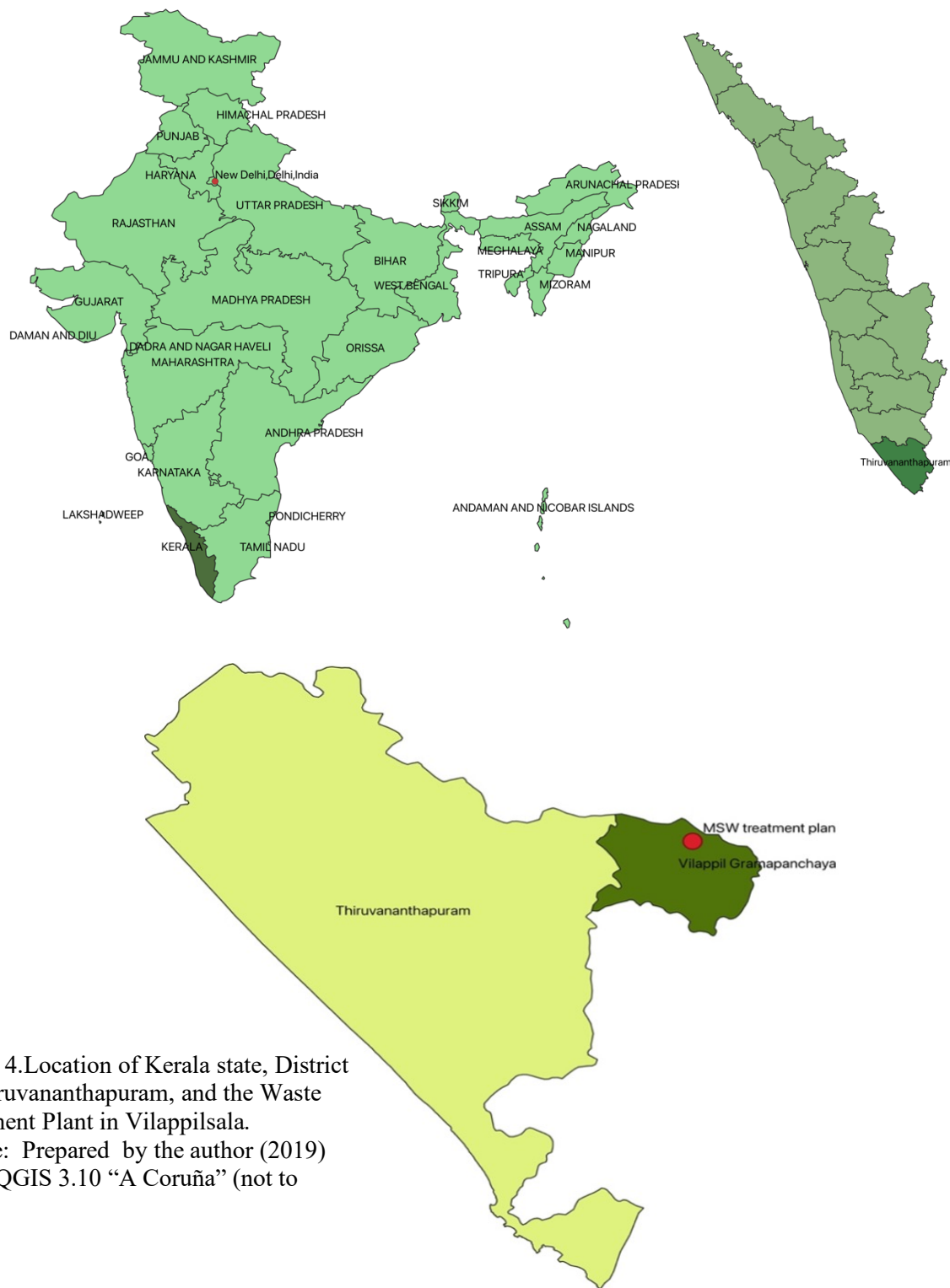


Figure 4. Location of Kerala state, District of Thiruvananthapuram, and the Waste Treatment Plant in Vilappilsala.
 Source: Prepared by the author (2019) using QGIS 3.10 "A Coruña" (not to scale)

Vilappilsala, a part of the larger Vilappil Grama Panchayath⁴⁵, was the location of Thiruvananthapuram's lone biodegradable waste management plant that was established in 1999-2000. The plant forms the locus of the conflict under study. Broadly, Kerala has a history of mobilisation with respect to environment and development, often spearheaded by the most marginalised communities (Damodaran, 2006). Furthermore, Kerala also has had a history of conflicts that explicitly involved waste management, with Ganesan (2017) observing that at least 13 sites of contention were reported in the year 2012, out of which the cases of Lalur, near Thrissur and Brahmapuram in Cochin have had historic and continuing relevance. While there have been recorded cases of conflicts around waste management in Kerala, for two factors, I have chosen to limit myself to the Vilappilsala, for the following reasons:

- 1) The Vilappilsala conflict is one of a handful of explicitly environment-based conflicts sites that have induced more significant ecological policy changes in the Indian scenario, joining the likes of the Silent Valley Movement and Chipko movements (Shyjan et al., 2005; Shakir et al., 2020). For instance, the Lalur conflict began around 1988 and continued up to 2014, is one of Kerala's most long-standing waste management conflicts, but Vilappilsala conflict was one of the major reasons for Kerala's move to its current system of decentralised waste management system.
- 2) The second factor influencing the selection of the case of Vilappilsala was that of the conflict being located in a periurban space. In choosing Vilappilsala, the thesis looks at examining the dynamics between the urban and the periurban where the continuum

45 Vilappil GP comprises of 20 wards and is itself a constituent of the Nemom Block Panchayat under the district of Thiruvananthapuram. For more see, <https://lsgkerala.gov.in/index.php/en/lsgd/localbody-list>

between urban and rural is put on full display along with interstitial spaces of the periurban at a more granular level.

While other instances of conflict such Lalur in 1988 or Brahmapuram in 2008⁴⁶ both were located in periurban spaces, the case of Vilappilsala was zeroed in due to its consequential nature vis-à-vis ecological policy in Kerala (Shyjan et al, 2005; Shakir et al, 2020). The changed nature of waste management in Thiruvananthapuram in terms of the adoption of decentralised systems of waste management and disposal can be directly traced to the conflict with Vilappilsala (Corporation of Thiruvananthapuram, 2016; Joly, 2018).

3.1.1. Gaining entry into the field site

One of the important aspects of fieldwork is the process of accessing the field. In my initial field visit, I had discovered that while a vast majority of the respondents were welcoming of my presence and of my questions, they were guarded and confused about the study and my intentions and some were outright sceptical about my study.

This made my entry into the field that much harder as the respondents were unsure as to how to perceive my presence here. I was variously perceived as a journalist or a government agent or as a student doing a ‘project’. While keen on helping me with the said project -and taking those opportunities to point out that Vilappilsala’s struggle was studied by very many students- I was, nevertheless, perceived as a perpetual outsider, the other.

It was therefore required that I explain myself and my interest in the conflict in a much more elaborate fashion to convince the respondents of the purpose of the study. Convincing my respondents of the motives and the ultimate goals of the researcher was significant to gain their

⁴⁶ More recently in early 2023 a massive fire broke out at the Brahmapuram landfill, redirecting attention to this site once more.

confidence in a more transparent, ethical manner and to ultimately build rapport.

3.1.2. Temporal Complications

In many ways I have been pursuing the case of Vilappilsala's struggle against the factory and, by association, against the Thiruvananthapuram Municipal Corporation, ever since the waste from Thiruvananthapuram was blockaded at Vilappilsala and sent back in October 2011. Much of my initial assumptions were tied to the struggle as a bounded phenomenon- temporally as well as spatially. However, I discovered through the course of my research that these contours of research needs to be revised so as to accommodate the experiences-of my respondents as well as my own - from the field. Consequently, I have gained two key insights:

- 1) I found that the study of the case cannot be limited to the study of the field site during the years of 2011-2012. Rather -as I found out in the course of my research- the conflict is part of a larger tapestry. As Gille (2001) shows in their work on siting conflict for a waste incinerator in Hungary, the boundedness of the field site in a globalised world is increasingly difficult to maintain, rather that field sites are produced continuously, both through time and space. The field site in my case, encompassed larger processes and relationships and stretches back to times before the land for the factory was acquired.
- 2) As is the case in similar studies, many of my respondents during the course of, my fieldwork often began with the question, "why are you studying this now? isn't this in the past, what is the point of studying this now?". As Gillan and Edwards (2020) point out the passage of time is an important ,and yet overlooked phenomenon in many studies and often holds significance in the way these movements present themselves. In this case since more than five years had passed since the protests occurred in the Vilappilsala, it was required that I explain the purpose and goals of the study in detail and in some ways justify my

questions. One could surmise that the respondents themselves were trying to understand why the conflict in Vilappilsala was relevant, considering the waste processing plant had been shut down in 2015/16.

3.2.Towards a reflexive understanding of the field

The debates and conversations⁴⁷ with respect to the role of the researcher in the field, emphasise the relationship between the knower and the known, and therefore hold vital significance in how research as an activity is conducted as well as the knowledge that is being produced. In contemporary times, the recognition that the researcher is as complicit in the production of knowledge as the world being studied, refuted the positivist stance of a ‘detached observer’ researcher (Roulston & Shelton, 2015). Therefore, researchers are encouraged to reflect on their own subjectivity and to examine how such subjectivities have shaped the process of research . Reflexivity as a concept and practice recognises that “inquiry is a practice of a deeply cultural sort, which can become reflexive only by investigating these relationships through inquiry itself (Hall,1999 as cited in Dean, 2021).Such ‘reflective practices’ have become a vital part of conducting qualitative research.

A reflexive practise is also central to Burawoy’s call for ECM⁴⁸, wherein reflexivity is tightly

47 Roulston and Shelton (2015) point out that “Bias[was] conceptualized as a ‘problem’ is inextricably entwined with epistemological questions concerning how knowledge about the social world is produced, what counts as research, and how the quality of research is assessed” .Debates around bias and subjectivity have a long-standing history in qualitative social research and “are well entrenched and much discussed in methodological literature”. Hammersley and Gomm (1997) argue that these assumptions of bias and subjectivity are grounded in the foundationalist traditions of enlightenment era science.

48 Reflexivity in the context of an Extended Case study Method, Burawoy(1998) argues that in engaging in extension of the case, through the linkages of micro and macro, the researcher, in addition to reflexivity on their personal level, reflects on the

coupled with the process of inquiry and acknowledges the role of the researcher (Kimball, 2019). In addition to nudging the researcher to view the activity of knowledge production from the standpoint of subordinated groups (Naples, 2007), reflexivity can serve as a check on the often unconscious and subtle influences that the researcher can have, in the process. A reflexive science accordingly-in the vein of- ECM is instrumental in “understanding how one’s gaze may affect the data one gathers and the interpretations one makes” (Dean, 2021). This is especially pertinent “...in studies focused on social inequalities, outsider research requires a keen reflexive eye for unequal power relations that may arise in data collection, the differing interpretations of perceived injustices witnessed, and the very process of objectification itself” (Bourdieu 1990 as cited in Dean 2021). In other words, a reflexive approach helps not only to locate the researcher vis-a-vis their position but also to ponder over questions such as “should my personal stories or experiences influence the way I conduct research?”; and “would taking such an approach not affect the methodology and theoretical direction?” (Subramani, 2019).

Therefore, such an exercise in reflexivity was also significant to examine my own initial assumptions-which were later revised- with respect to the field site and the conflict in general. While my initial impressions⁴⁹ (coloured by my own positionality) had influenced me to view the conflict of Vilappilsala as nothing more than an inconvenience to myself and the citizens of Thiruvananthapuram in general, it was however, my training in Sociology that prodded me to look deeper than the narratives that were at play during the height of the conflict in 2011-12. As

qualitative and quantitative effect the extension has had/will have in terms of the linkages being observed and made: Burawoy, terms this reflexive science. M. Burawoy, (1998).

49 My personal first-hand experience of the conflict in 2011 and the experience of staying in Thiruvananthapuram which was one of the physical sites wherein the conflict unfolded.

Macbeth (2001) argues a professional orientation- in this case my training in Sociology and associated research practices- provides a framework for “... crafting descriptions that might be relieved of the gendered, cultural, rational, and still other hegemonies and centricities...”. Indeed, my training as a Sociologist and my involvement in studying the struggle made me conscious of the privileges that my social positions afford me as an urban upper-caste male individual, who in many ways took for granted the existing systems of waste management. On the other hand I discovered that my own positionality was actively examined by my respondents -throughout the duration of our conversations- by enquiring as to what my educational background was, what my parents and family members’ occupation were (if any). They would also ask questions regarding the relevance of the study, in an effort I believe, to understand my motives vis-à-vis the study and thereby further understand my intentions and positionality.

In sum reflexivity, in the context of research and especially in terms of the extended case, is a crucial methodological tool encouraging the researcher to turn the spotlight back on themselves and examine their role in the process of research, especially social research and consequently, reminds the researcher that knowledge production involves the researcher as well as the world being studied. Additionally, a reflexive science within an ECM paradigm is instrumental to examine the linkages between the micro and macro in the case of which the extension is being made, to then make the focus on analysis various processes rather than on the bounded case per se (Wadham & Warren, 2014).

4. Opening my toolkit: data collection and analysis

4.1.Data Collection

Strauss and Corbin (2008) point out that knowing what data to collect, when, where and how is one of the dilemmas facing the researcher. In terms of this thesis, the study was reconstructing a conflict that was over five years after the active component of the movement had subsided by the time of initial data collection. The data collection phase was carried out via three rounds of fieldwork, beginning with a round of three weeks for a preliminary field visit. This was followed by two more rounds of fieldwork of four months each for a total of nine months in the field.

4.1.1. Fieldwork

In early 2018, I had spent three weeks not only visiting the site of the erstwhile waste plant, but also establishing rapport with the residents. The core objective of this round of fieldwork to obtain a ‘first-cut’ understanding of the field site as well as establishing rapport and relationships for upcoming rounds of fieldwork.

The initial process of data collection mostly centred around reconstructing the protests of 2011-12 for which I began by searching for documents which could be used as springboards for further research. For this purpose, I had turned to newspaper articles that appeared in the leading Malayalam and English dailies of the protest period of 2011-12. Some interviews were also conducted during this preliminary field visit. These interviews were based on a series of open-ended questions, prepared beforehand (See Appendix B). The questions asked were not in any a particular order, instead, preferring the respondent to take a conversational approach to the interview process, all the while taking care to include all the questions, I had planned on asking.

The majority of the fieldwork was conducted during the two rounds of field visit, between September and December 2019 and October and February 2022, respectively. During the first round (i.e., September-December 2019), I had concentrated on collecting data from experts, academics, and government officials in Thiruvananthapuram. These respondents were interviewed for a considerable length of time. Additionally, I had visited the State Central Library of Kerala at Thiruvananthapuram and utilised their physical newspaper archives⁵⁰ in both English and Malayalam dailies. My aim was to look up newspaper articles that directly concerned the keywords, “Vilappilsala”, “waste management” and “Thiruvananthapuram”. Consequently, I narrowed my search to the months the conflict was at its most intense⁵¹, to the months from August 2011 to August 2013 and recovered articles from this time period. In addition to this, in an effort to obtain documents, files and materials from the TMC’s side, I had filed a petition under the Right to Information Act(RTI), directed at the Project Section, that fell under the purview of the Health Department of the Corporation. I had done so under the advice of several respondents, who told me that while they could not provide documents, that the Project Section (which was in charge of this project within the TMC) would be able to do so. However, the petition was eventually unsuccessful and was returned with a note that the petition was being internally moved to “relevant” department. While I had hoped that the RTI would be successful and I would get access to the project documents, I was eventually able to procure most of the documents from my other

50 The newspaper archives are housed in the State Central Library located in Thiruvananthapuram (est. 1829 AD). The newspaper archives are house along with certified and non-certified extracts of Kerala Government Gazette. For more information see, <https://statelibrary.kerala.gov.in/en/sample-page/>

51 I estimated intensity based on a combination of appearances of media articles in the public domain at the time as well as the dates of the petitions filed in the courts, these dates were initially recalled from my own memory of the conflict in 2011. This combination of filing dates as well as the appearance of media articles painted a rough outline of the ebb and flow of intensity with respect to the conflict.

respondents, especially Unni⁵², who was involved with the Janakeeya Samara Samithi and later with the Samyukta Samara Samithi.

As I was preparing to return to the field in the February of 2020, the pandemic had set in, disrupting the earlier plan of conducting a field work round in 2020 itself. Nevertheless, I planned to return to the field after the pandemic had somewhat become manageable at the site. Subsequently, I returned to the field in October of 2021, when the virulence had abated and continued to stay in the field until February 2022. During this time, I had conducted more in-depth interviews with residents near the factory and activists and participants in the Vilappilsala movement.

4.1.2. Sampling

Initially, during my preliminary field visit, I began with exploring some of the newspaper articles towards understanding details regarding the context and processes of the conflict and the associated protests. From these newspapers articles I derived a list of individuals I could contact to start the data collection process. Throughout the process of research, I have utilised snowballing technique (a form of purposive sampling technique) to have my respondents point me to other individuals they may think have had involvement in the protests; the individuals interviewed included academics, policymakers and practitioners, and political representatives(See Appendix B). As Noy(2008) observes, snowballing technique involves “access[ing] informants through contact information, provided by other informants” in a repetitive and accumulative process that gradually, creates a network of respondents. In relying on snowballing, my intention was to tap into the networks that the respondents had created during the course of the conflict. Furthermore, in terms of knowledge production, this technique -keeping with ECM’s model of reflexive science(Burawoy,1998)-also privileges the respondents’ network and agency in terms of data

⁵² The names of all the respondents have been changed to protect their privacy.

access, as opposed to the researcher's own 'selection' process. However, the researcher themselves is not a mere spectator in this process. Indeed, the researcher is able to exercise their agency in terms of deciding the contours of sampling, viz. how much data is enough data. This technique called saturation, has its roots in the Grounded theoretical traditions⁵³, (Glaser and Strauss 1967, as cited in Saunders et al., 2018). Although saturation is "a methodological principle", Saunders and others have observed that the concept has been either defined in a variety of manners or remain relatively undefined. Generally speaking, saturation can be taken as a sign to cease data collection or its analysis. Methodologically, saturation can either occur at the data collection phase or at the data analysis phase.⁵⁴ For the purpose of this thesis, I utilised a two-stage saturation technique using a combination of data- based saturation, and analysis-based saturation. In other words, the snowballing process was terminated as and when the data collected ceased to add to the categories being developed, subsequently, saturation was considered to have achieved when the codes and themes emerging out of the data collected had also halted, signaling analysis-based saturation.

The data collected was analysed by means of Qualitative Content Analysis (QCA). Along with the interviews, documents such as court affidavits, rulings and orders promulgated by the respective local self-governing body with regard to the Vilappilsala Waste treatment plant were taken into consideration for the analysis. In addition to this, I relied on other published accounts and documents available in the public domain, such as expert reports and similar accounts.

4.1.3. Coding

Coding is one of the most vital activities in qualitative research. Saldaña(2013) points out that "a code in qualitative inquiry is most often a word or short phrase that symbolically assigns a

53 Saturation in the Grounded theory forms part of process Strauss and Glaser call theoretical sampling..

54 In fact, Saunders et al., (2018) make a four- fold classification of saturation based on its usage during data collection or data analysis. For more see Saunders et.al (2018)

summative, salient, essence-capturing, and/or evocative attribute for a portion of language-based or visual data”. These fragments of data can range “... from a single phrase to an entire page of text to a stream of moving images” (Saldaña, 2013). Often, coding serves as shorthand to label, compile, collate and organise data (Charmaz, 1983, as cited in Bryman, 2016). Charmaz portrays coding as “... the ‘critical link’ between data collection and their explanation of meaning.” (2001, as cited in Saldaña, 2013). However, apart from breaking down the collected data into manageable fragments, coding can also remind the researcher of their role in the process of research. Firstly, as these codes are also subject to the interpretative faculty of the researcher, coding is by no means an ‘objective’ endeavour. In fact, drawing on Stuart Hall’s encoding/decoding model of communication (Hall, 1980) one could very well argue that coding as an intellectual process is one that is laced with power-dynamics or that they are permeated with “complex structures of domination”. In this case, it can be interpreted that the researcher themselves have a strong impact on the process of coding in terms of what is coded and what kind of coding is chosen. Indeed, the very acts of coding and recoding are process of active contextualising and decontextualizing, over which the researcher has a fair degree of control. Secondly, the decision to code is also based on the methodological orientation adopted by the researcher. For instance, coding can occur separately from or in conjunction with data collection, coding can also be an emergent process (where the codes are allowed to emerge from the data) or an *a priori* process (where the data is arranged in accordance with a pre-agreed set of codes). While the coding workflow adopted by the researcher is based on several factors such as time and research questions of the study, it is undeniable that the impact of the researcher’s agency on the coding process is far from objective and therefore deserves reflection (Blair, 2015).

Practically, the process of Qualitative Content Analysis using codes involves several steps. As

Coates and others (2021) assert, coding must have several steps indeed, most researchers would use several rounds of coding to arrive at their desired framework. Each successive cycle of coding builds on the previous cycle and concentrates on the granular details, resolving discrepancies within the collected data and in delineating discrete themes.

In terms of the present study, once I had a tranche of data collected, I began transcribing the interviews from Malayalam to English and simultaneously began a first-level coding pass or a ‘First Coding Cycle’ (Saldaña, 2013) using an Open Coding⁵⁵ concept. At this point an initial set of categories were developed from data. These data fragments were then organised into concepts that would later correspond to the codes developed in the second cycle (Flick, 2009)

Once the first level of coding had been completed, I proceeded to compile these first-level codes into aggregate codes. Saldaña (2013) points out that ‘Second Cycle Coding’ can be “... the exact same units, longer passages of text, analytic memos about the data, and even a reconfiguration of the codes themselves developed thus far.” In my case, I proceeded to compile the second cycle of coding by rearranging the aggregate codes that had emerged in the first cycle into similar categories along an axis, also known as Axial Coding⁵⁶ technique. In effect I had aggregated and sorted over 75 individual codes into 22 mid-level aggregate codes. Once this second order coding structure had been formed, I proceeded to a Third cycle of coding by coding these aggregate codes into higher levels themes in effect into a thematic framework. This thematic framework was based on the research questions framed for the study as the organising principle. A codebook (See

55 Open coding-while used prevalently in GT- can be defined as a form of rudimentary coding, where codes and categories are not yet set and are therefore amenable for further manipulation.

56 According to Strauss and Corbin (1998), Axial coding process creates “categories [that] are related to their subcategories to form more precise and complete explanations”.

Appendix C) was developed based on the emerging thematic framework. In using the codebook, the codes were organised into themes that in turn corresponded to a research question, each thematic signifying responses emerging from the data collected.

4.1.4. Pandemic Setback: COVID-19 and data collection

The COVID-19 pandemic had affected my own research in unexpected ways, most significantly in terms of the momentum that was built up vis-à-vis data collection. Initially, I had planned to conduct and perhaps conclude my fieldwork component by the end of 2020. However, the pandemic and resultant disruptions had changed the manner in which my respondents were able to contribute to my research. The lockdown and restrictions ensured that along with restrictions to face to face interviews, there was a significant slowdown in terms of collecting documents and accessing the newspaper archives. Only those available in the public domain on the internet were readily available to access and analyse. In terms of face-to-face interviews, I was compelled to resort to alternative strategies that included using digital and mobile means of reaching out to my respondents. This, however, proved futile as most of my respondents were reluctant to speak using mobile phones or videoconferencing for extended periods of time.

While I returned to the field in 2021, the lingering effects of the second wave of the COVID-19 pandemic put me in a situation that required to re-evaluate my fieldwork strategy and opt for a more hybrid strategy, including non-synchronous techniques such as SMS/WhatsApp text messages and emails along with synchronous techniques such as online video calling and phone calls .Building back the rapport after a gap of a year or so was an additional challenge I had encountered. However, my discussions centred around COVID-19 and its effects, gradually helped to build back rapport with my respondents.

4.2.Data Analysis

Case study research can underpin the study of several kinds of social situations, such as conflict events and social movements, due to its ability to situate the questions being asked in the local context as well as an approach to “...the complexities and contradictions of real-life...” (Flyvbjerg, 2006). To achieve this, case study research relies on data collected from various sources and techniques such as detailed semi/unstructured interviews, focused group discussions, and secondary data sources such as newspapers and associated print media (Soule, 2013).

In the study of social movements and of protests, case study techniques have previously been used to examine and analyse the processes and mechanisms involved in the movement or protests (Snow, 2013) and have helped to further the process of theorisation from the case (Ormrod, 2011). In terms of the present thesis, I turn to study the Vilappilsala conflict and the movement that ensued by using several tools; some of these tools aim to look at the conflict in terms of events and frames while others focus on claim-making repertoires and organisational tactics. Sitting squarely within a critical analytical tradition that ECM⁵⁷ advocates (Burawoy, 1998; Eliasoph & Lichterman, 1999; Tavory & Timmermans, 2009; Kimball, 2019; Timmermans & Tavory, 2022) and, indeed, the larger Case study method, as described by Yin and others (Ragin, 1992; Yin, 2014), the present case relies on content analysis, a common technique used in the study of social movements and of protests, for the interpretation and analysis of the data collected.

In general content analysis applied to social movement studies fall into two broad categories: quantitative and qualitative. Scholars such as Tarrow (1996, 2011) have used Protest Event Analysis (PEA) as a form of quantitative content analysis. Hutter (2014) remarks that PEA is often viewed

⁵⁷ Ontologically, my research position looks to the ECM for its emphasis on the creation of meso- level theories by linking cross-temporal and cross spatial phenomena such as Urbanisation and Environmental degradation to ‘local’ happenings such as waste management practices and conflicts surrounding its management.

by researchers “as a type of content analysis⁵⁸, to systematically assess the amount and features of protests across various geographical areas (from the local level up to the supranational level) and over time (from short periods of time up to several decades)”⁵⁹ using “simple descriptive statistical [analysis]...using uni- or bivariate statistics and plots often help in answering key research questions”(Soule, 2013).

However, there have been contentions regarding the domination of PEA in social movement research, with many scholars arguing that the PEA’s overreliance on protest data may be eclipsing more nuanced aspects of contentions and protests (Bagguley, 2010). Several authors have instead turned to using the alternative Qualitative Content Analysis method (QCA). This technique has been steadily gaining ground in social science research (Hsieh & Shannon, 2005), especially in situations that demand nuanced insights at a much more granular level than PEA can afford.

Definitionally Qualitative Content Analysis varies from researcher to researcher as well as from project to project but can be generally be defined as a technique used to analyse text-based data, “no matter where this material comes from” (Flick, 2009). Text data itself can range from verbal or print; it can be electronic in medium and can also be extracted from a combination of audio and video formats. Weber (1990, as cited in Hsieh & Shannon, 2005) points out that “qualitative content analysis goes beyond merely counting words to examining language intensely for the purpose of classifying large amounts of text into an efficient number of categories that represent

58 Krippendorff defines content analysis as "a research technique for making replicable and valid inferences from texts (or other meaningful matter) to the contexts of their use." For more, see, Krippendorff(2004)

59 Furthermore, Hutter(2014) lays down four vital elements of PEA:

“(a)PEA is a type of (quantitative) content analysis.(b)PEA turns words into numbers.(c)PEA allows for the mapping of the occurrences and characteristics of protests across geographical areas, across issues/movements, and over time.(d)PEA is closely linked to the political process approach.

similar meanings”. Hsieh and others define it as “research method for the subjective interpretation of the content of text data through the systematic classification process of coding and identifying themes or patterns” (Hsieh & Shannon, 2005). Mayring(1983,2000 as cited in Flick 2009) recommends a five step procedure for QCA of textual material:

Step	Explanation
Definition of the material	“to select the interviews or those parts that are relevant for answering the research question”
Analyzing the situation of data collection	“to analyze the situation of data collection (how was the material generated, who was involved, who was present in the interview situation, where do the documents to be analyzed come from?)”
Characterization of material	“was the material documented with a recording or a protocol, was there an influence on the transcription of the text when it was edited?”
Direction of the analysis for the selected texts	“To indicate the direction of the analysis, to enquire “what one actually wants to interpret out of them(data)”
The research question is differentiated on the basis of theories	“Depends on the articulation and definition of the research question before hand”

Table 4.Procedure for QCA.

Source: Adapted from Mayring(1983 as cited in Flick,2009)

Table 4 represents the five major steps that Mayring suggest should be included in the process of QCA. Drawing from the Mayring’s model⁶⁰ of QCA, (2000 cited in Flick 2009), Hsieh and Shannon(2005) have further classified QCA into three commonly used techniques: (1) conventional, (2) directed, and (3) summative. These forms can be better described as practices within the broader QCA approach.

Firstly, the conventional form generally is used to describe a phenomenon where researchers avoid preconceived categories instead, letting the categories emerge from the data itself. Data collection is often conducted with the purpose of extracting maximum information from the respondents with

⁶⁰ For more see, Mayring’s procedure for QCA in Flick (2009: 323)

a broad and open-ended strategy for data collection. It is to be noted that critics have compared how conventional Qualitative Content Analysis practice skirts close to the Grounded Theory Method (GTM); however, unlike traditional GT design, there is engagement with theoretical frameworks, which are addressed and discussed in light of the data that has emerged.

On the other hand, the directed practice presents a contrarian view. Hsieh et al. point out that the goal of “a directed approach to content analysis is to validate or extend conceptually a theoretical framework or theory. Existing theory or research can help focus the research question” (Hsieh et al., 2005). This practice utilises a more structured approach in comparison to the conventional one. In terms of data collection-the directed approach- while starting off with a theoretical framework, the researchers are also encouraged to code almost immediately based on a predetermined set of coding frameworks. Any new set of data not in the coding framework is then analysed and determined for its relevance to the existing framework and the possibility of creating newer codes. The challenge with this practice is the obvious one of theoretical bias. An additional side effect of this practice is also that the respondents being interviewed may catch hints of the researchers’ leanings and tailor their responses to what the respondents think the researcher needs or wants to hear.

Finally, the summative practice uses a practice similar to PEA by quantifying specific phrases and terms used in the text. However, the summative practice differs from PEA, significantly in that meaning is not inferred from the process of quantification. Instead, it explores usage. In other words, if the process had stopped at this point, it would be akin to PEA; however by continuing to

engage further the data, this practice includes latent content analysis⁶¹.

The three practices suggested by Mayring(2000 cited in Flick 2009) and Hsieh and Shannon(2005) largely represent ideal-typical scenarios of QCA, however during the course of analysing the data collected, I realised the necessity of combining one or more of these practices. Accordingly, the data collected was largely analysed via the conventional approach, however modifying it according to the context. While the process of analysis was concurrently begun with that of data collection (in a fashion similar to the directed approach), the codified categories and fragments were largely organised and analysed based on conventional approach. The approach to data collection had been largely open-ended and sought to uncover as much as possible from the respondents by relying on purposive sampling more specifically, the snowballing sampling technique. The research questions and the objectives of the study were also developed further on the basis of the analysis of the emergent categories and eventually organised into a thematic framework.

4.2.1. Computer Assisted Analysis

Computer-Assisted Qualitative Data Analysis Software (CAQDAS)⁶² refers to a set of software which has become popular since its development in the 2000s, with a move towards larger scale integration with the internet in a CAQDAS 2.0 framework, emerging in recent years(Di

61 Latent content analysis refers to the process of interpretation of content (Holsti, 1969). In this analysis, the focus is on discovering the underlying meanings of the words or the content (Babbie, 1992; Catanzaro, 1988; Morse & Field,1995; Hsei et al.,2005)

62 While there are clearly no leaders in the CAQDAS market unlike SPSS in terms of Quantitative Analysis Software, several programs offer functionalities that are similar to each other, such as NVIVO(published by QSR International),ATLAS.ti(published by Scientific software GmbH), MAXQDA(published by VERBI GmbH) on the basis of a license, there are Free and Open Source Software(FOSS) versions of this software, which, however, is not quite capable of in terms of functionalities. Most of the difference between the licensed programs boils down to the researcher's type pf study, proficiency with software in general and, therefore, to personal preference and ease of use. At the time of writing this thesis, all three licensed programs bear resemblances in User Interface and Experience and functionalities.

Gregoria,2010 as cited in Rodik & Primorac, 2015). Researchers have increasingly adopted such software to aid in their research analysis phases. CAQDAS systems comprise a variety of software suites that can be used to interpret and analyse different types of data. From images to texts to Audio-Video clips, recent CAQDAS systems can store, collate, and retrieve vast amounts of data (Lucas, 2017). CAQDAS can also be used to generate accurate visual outputs such as Hierarchy charts, Code trees and so on. Bryman points out that most of the CAQDAS available in the market are some variations of code-and-retrieve⁶³ systems. This means that most of the software, while capable of coding and collating and then retrieving vast amounts of data, eliminates manual components of qualitative analysis processes. While the primary function of CAQDAS has been in terms of analysis, comparison and interpretation of data, most of the CAQDA software allow for the storage, sorting and collation of data that has been collected, via transcripts.

I have chosen to use NVIVO⁶⁴, which is published by QSR international, for the process of data storage, management, coding and retrieval functions. The use of NVIVO helps one manage the datasets much more efficiently as well as make analysis much faster along with enabling faster retrieval of data and making connections in a visual manner. The intention of relying on CAQDAS such as NVIVO is to manage the vast amounts of data generated, in terms of storage and collation, in favour of efficiently managing practical considerations such as time and money. CAQDA software such as NVIVO are also important tools to analyse the data collected. Using NVIVO's

63 Coding and retrieving process is often used as a shorthand to describe the qualitative analysis. With respect to CAQDA software, coding would denote the organization of data into fragments (sometimes called nodes), while retrieval would imply the function to show codes which are organized into their respective categories. For more see <https://www.quirkos.com/learn-qualitative/qualitative-analysis-software.html> accessed on 14th January 2023.

64 At the beginning of my dissertation research, NVIVO 12 pro was one of the versions on offer, which was later upgraded to NVIVO 2020 and has since remained the same.

CAQDA Software as crucially aiding in the more pressing issues of data management as well as retrieval. While no software is perfect, the emphasis on the researcher themselves to interpret data, ensures that the reins of the process remains with the researcher. In sum, the use of CAQDA Software can be used not only analysis but during the process of data collection as well. Its use a database system can help the researcher make queries that essentially isolates the codes from the source and opens up avenues for innovative hypotheses which can be generated and examined with relative ease.

5. Limitations

The Extended Case study Method has been used across several domains from Cultural Studies (Eliasoph & Lichterman, 1999) to International Relations(Lai & Roccu, 2019) to Organisational Studies(Wadham & Warren, 2014). The usage of ECM across disciplines has been driven by its strong emphasis on connecting everyday micro-level happenings to macro level phenomena, which leads Eliasoph and Lichterman(1999) to describe ECM as “not just a “method”,[or] a cookbook for doing social research; it is also a social theory in its own right”. In other words the extension of the case by drawing connections between macro and micro are central to the ECM.

However, the extension of the case is often subjective and contextual. That is to say that the extendedness of the case is often dependent upon several factors including the researcher’s own cognitive abilities. As Wadham and Warren(2014) point out “predetermining what is significant or important” is an important and crucial to ECM, the researcher can fall into the trap of limiting too much or failing to limit the extension. In the case of Vilappilsala conflict, the extendedness of the case was determined by approaching Vilappilsala and Thiruvananthapuram from a regional perspective which focused on the linkages between the two spaces. While focusing on everyday linkages between Vilappilsala and Thiruvananthapuram via the flow of MSW, the study has also

been cognizant of broader concerns such as urbanisation and the “neoliberalization of nature” (Castree, 2005).

Similarly, another challenge I had encountered while operationalising ECM in the case of Vilappilsala was that of power vis-à-vis my positionality as a researcher and that of collaboration. For instance, Wadham and Warren (2014) argue that the researchers’ very presence produces a difference in terms of power relations and therefore affects the production of knowledge. While ECM emphasizes a collaborative approach to research, Considering the practicality of the study, adopting a measured approach where the respondents are involved but to a certain degree, which is agreed upon by the researcher and their respondents, provides a practical solution to such a challenge(Wadham and Warren,2014). In the case of Vilappilsala, I had, as a method of research relied on deploying semi-structured interviews where the respondents were encouraged to express their opinions and experiences freely, questions were used as ‘nudges’ to steer the conversation on topic. In this case while I welcomed my respondents to freely recount their experiences, I was also cognizant of my own positionality as well as the practical imperatives of the study and therefore, every effort has been made to be transparent to the respondents in terms of the study and its goals and in terms of my own positionality.

6. Conclusion

The present chapter elaborates on the methodological framework and the data collection and analysis methods used in the study. In outlining a suitable methodology for the study, the chapter establishes the location of the site of study as Vilappilsala, Kerala. In locating the enquiry within a specific socio-environmental conflict, that of the Vilappilsala conflict, I adopt a case study research paradigm. A case study approach using qualitative techniques is chosen here in order to capture the context of this particular phenomenon, the strategies, opinions, attitudes, knowledge

systems and spatialities, in short, the socio-cultural facets of the conflict event as well as associated situations of the particular phenomenon and to this end the primary output of this thesis is the codification of the Vilappilsala conflict in the form of a case study. The chapter argues that the theoretical framework of a Situated Urban Political Ecology(SUPE) is further bolstered by the methodological support of Burawoy's Extended Case Method (ECM), developing the usage of case study in Political Ecology and Urban Political Ecology research, that it has been hitherto. The Extended Case study Method with respect to this thesis, is deployed to move past locating in the "local" m to consider broader phenomena and its implications on the case .In other words ECM is used to extend the analysis beyond the description of the case of Vilappilsala conflict, into engaging with larger processes such as globalisation and urbanisation . In this chapter, I have argued that ECM combined with a qualitative case study approach can not only help PE and UPE research connect the local with the global but also provide an avenue for developing theorisation from the data that has been collected. Furthermore, I argue that using ECM as a method, despite its limitations, can be significant in advancing UPE and PE, by considering the data collected in the context of theoretical framings with regards to urbanisation.

CHAPTER 4

Worlding the Vilappilsala conflict: exploring the context and claim-making process

1. Introduction

In the previous chapters of the thesis, I have introduced the central research problem and objectives, along with constructing a theoretical and methodological framework towards investigating the questions that have emerged. The next two chapters are a detailed discussion on the evidence and interpretation gathered around the research questions. The research questions addressed in this chapter are namely:

- 1) The socio-political contexts that led to conflicts in Vilappilsala during the years 2011-16 and
- 2) The mechanisms by which a resistance by the residents was organised and structured, at Vilappilsala.

The first question is sought to be answered in two ways, firstly by analysing MSW and its management in the context of Kerala and secondly by tracing the emergence and operationalization of waste as category of policy. In this process one observes that the strategies and policies used in the management of waste has hinged on four interlinked phenomena: (1) Change in consumption of goods (2) Materials (3) Networks of MSW management and finally (4) Worldviews vis-à-vis waste. It is in the context of these four interlinked phenomena, that the chapter reconstructs the

Vilappilsala conflict. In undertaking this endeavour, the intent has been to discern the context-the social, political, economic- of Kerala, using waste as an axis.

The second question to be answered is that of the strategies and tactics adopted with respect to mobilization by the residents of Vilappilsala. Such an analysis would rely on adapting and extending the theoretical lens of Contentious Politics (CP) as developed by Douglas McAdam, Charles Tilly and Sidney Tarrow (McAdam et al., 2004; Tilly & Tarrow, 2015) to further understand how and why the agitators in the Vilappilsala conflict relied on the strategies that they did. Furthermore, I argue that the Contentious Politics framework combined with spatial factors(such as the concepts of place and scale)in mobilization, is useful in unpacking the interplay among the political and ecological facets of the conflict in Vilappilsala.

To sum, in the following sections, the chapter reconstructs the Vilappilsala conflict by investigating the larger context of waste and its management practices, exploring the processes and phenomena that influenced the conflict as well as the tactics and strategies used in the conflict.

2. Background: Managing MSW in Kerala

Before turning to the task of reconstructing the Vilappilsala conflict, it is important to briefly discuss the importance of context in situating the conflict. In the case of Vilappilsala, as in many cases, the context of the case under investigation not only establishes the crucial background to the event but also provides significant insight into understanding the hows and the whys of the said case(Korstjens & Moser, 2017). Drawing on recent Urban Political Ecology scholarship(Cornea et al., 2017 ;Coelho, 2018) I argue that contextualising the conflict is necessary to situate the case of Vilappilsala within the political, social and economic processes in Kerala. Moreover, in keeping with UPE scholarship, I argue that context brings to fore, the socionatural characteristic of waste and establishes the influence that these processes have had upon the policies

and practices in terms of the waste(solid waste included) and its management in Kerala and in the case of the Vilappilsala conflict.

From an institutional standpoint, the Municipal Solid Waste(Handling and Management) Rules of 2000,affixes the responsibility of sanitation and public health, which includes waste management (solid and liquid alike) to Local Self Government Institutions (LSGIs) or Panchayati Raj Institutions (PRIs). However, the governance of waste in Kerala, as in the rest of the country, is composed of a complex web of roles and responsibilities fulfilled by different administrative agencies. The Union and State Governments have typically framed broader policy directions and provided funding to such policies. For instance, the Jawaharlal Nehru National Urban Renewal Mission (JNNURM) (2005-2014) and later the Atal Mission for Renewal and Urban Transformation (AMRUT) (2014- present) were mostly advisory and funding agencies that would broadly guide the various state and central agencies with respect to policies on various aspects of sanitation, including that of Solid Waste Management. On the other hand, the Clean Kerala Mission (2002-2008) was the primary nodal agency for sanitation and waste management in Kerala; until its merger with the *Malinya Mukta Keralam*(MMK)⁶⁵ and the Total Sanitation Campaign resulting in the newer agency of Suchitwa Kerala(Vasuki, 2015). The role of waste collection, its removal, and disposal still lay with the respective LSGI and the enforcement of this responsibility lay with that of the State Pollution Control Board (SPCB).

Prevalent in these strategies and policies lay the understanding and an emphasis of waste as a material that needed to be managed. However, waste as Swyngedouw and others(2006) have pointed out is simultaneously a social and a material artefact. Therefore, I argue that waste and its

⁶⁵ Translates to Waste Free Kerala.

management(MSW included)in Kerala must also be analysed from a socio-political standpoint. To understand the changing nature of the waste-both in terms of the quantum of waste being produced and the strategies and policies adopted to manage such waste in Kerala along with understanding its socio-political connotations- I analyse waste and its management in Kerala through the lens of four interlinked phenomena:

a) Change in consumption of goods

The patterns of consumption-spurred in part by the sharp increase in migration to West Asian countries, also known as the ‘gulf boom of the 1970s’-had changed in Kerala. The remittances and investments flowing from the ‘Middle East’ (more accurately West Asian) countries resulted in an economic boom in the state, increasing disposable incomes as well as an increase in consumption⁶⁶ of goods that were introduced mostly via the returning migrants (K. Zachariah et al., 2001b). The increase in consumption of consumer goods such as readymade clothes and electronics including TVs and VCRs(K. Zachariah et al., 2001a; Zachariah & Rajan, 2004) coupled with increased construction of *pakka* houses resulted in the materials such as plastic, glass and similar non-biodegradable materials being introduced into and changing the waste streams of households(Osella & Osella, 1999;Nair and Sridhar,2005; Mannathukkaren, 2023)

Furthermore, the introduction of plastic and the prevalence of non-biodegradable materials into waste streams significantly altered processes of discard as well. Discard in this context refers to the designation of certain materials as waste resulting in such materials being thrown

66 The impact of migration of the changing patterns of the consumption has been well documented by works such as Osella and Osella(1999), Mannathukkaren, (2023) .Zachariah and their co-authors characterize this as a rise in conspicuous consumption and the rise of the popularity of Veblen goods. whereas Ossella and Ossella(1999) and Mannathukaaren (2023), describe this phenomenon as Transient consumption. For more see K.C Zachariah,E.T Mathew and S.Irudaya Rajan. (2001), Osella and Osella(1999) and Mannathukaaren(2023).

away(Liboirion & Lepawsky, 2022). For instance, wrapping plastic had risen in prominence mostly due to immigrants transporting or sending consumer goods to the their relatives and family. Subsequently, plastic wrapping(which is typically single use) became a choice material for packaging as opposed to traditional packing materials such as banana leaves and newspaper paper wrapping. This change resulted in the consumers preferring goods packaged in plastic wrapping(Sridhar and Nair,2005;Sudhakaran,personal communication,2019). This change in practices of discard was also largely influenced by the availability of single use materials such as Poly-Vinyl Chloride(PVC) plastics in the background of the liberalization of the Indian economy in the 1990s. The changing patterns of consumption and discard of households, individuals and communities therefore, significantly influenced waste creation.

b) Materials

As mentioned above, the changes in the waste stream also stemmed from the change in the nature of materials being discarded. For instance the introduction of plastic- a process that stretches before the ‘gulf boom of 1970s’ but accelerated in the background-as a major material to the waste stream contributed to a shift in the quantity of waste being produced. The introduction and mainstreaming of plastic and other Non-Biodegradable Waste (NBDW)resulted in a quantitative increase in day-to-day flows of waste (from households, small and large commercial establishments) in comparison to bio-degradable waste which could be managed locally or on site (K. Nair & Sridhar, 2005; Kumar, 2017).

However, materials such as plastic were significant for their ‘sociality’⁶⁷ as well, appearing in the everyday lives of communities with ever-increasing frequencies (Hodges 2018). As Osella &

67 Sociality in this instance refers to the social effects the material(Hodges refers to the social significance of plastic in this case) has on communities. For more see, S. Hodges (2018).

Osella, (1999) observe, this increase in consumption of goods(including plastic) were seen as markers of social mobility, especially in the case of most backward and marginalized communities in Kerala and represented an entry point to changing their social status.

While materials such as plastic contributed toward increasing the longevity and access to everyday household goods such as buckets, mugs, combs etc.⁶⁸ , the relatively low-cost of production of these materials, contributed to the emergence of plastic and NBDWs as a major part of the waste stream, which existing pathways were ill-equipped to handle. This resulted in the need for policy instruments to respond to the emerging challenge of managing plastic and NBD waste, which were often found to be discarded unscientifically (K. Nair & Sridhar, 2005).

c) Networks of MSW management

From an institutional standpoint the rise of non-biodegradable waste in everyday lives and waste streams underscored that existing ways of waste management practices were no longer suitable. Therefore municipal bodies recognizing the need for formal systems began to emphasize the need to strengthen pathways of waste. The emerging policy responses⁶⁹ therefore ‘formalising’ such pathways and systems of management of MSW tended to replace existing but informal networks of managing waste, deeming them as inadequate.

This has been the case in India, at both the federal and the state level, where several policy instruments, regulations and legislations -that were enacted in the wake of the liberalization of the

68 Hodges points out that the rise of plastic products in popularity was marked by its longevity and versatility. For most backward and marginalized communities, plastic products represented an entry point to partake in the world of consumption. Moreover, the relatively resilient and versatile nature of plastic products also contributed toward its rapid adoption. For more see S. Hodges (2018).

69 MSW Rules of 2000 represented a major first step in formalizing the category of Municipal Solid Waste in terms of policy instruments. Earlier laws tended to typically subsume MSW under various other categories. For more see, A. Prabhakar(2022)

national economy- brought increased focus on to ‘tackling’ MSW as a distinct activity unto itself. Rémi de Bercegol and Shankare Gowda(2019) argue that this led to the adoption of practices designated as ‘formal’⁷⁰, which displaced existing “chains of waste recovery and recycling”(de Bercegol and Gowda, 2019). For instance, in the case of Thiruvananthapuram, the increase in the quantum of waste as well as the changed nature of the waste streams prompted the TMC to institute door-step MSW collection(with a monthly fee paid by the households). End users(in this case households, small and medium commercial establishments) were encouraged to utilize this system. This resulted in households-in an effort to fully utilize the fee paid- included waste such as plastic and other NBD Waste in their daily collections eventually moving away from their dependence on the itinerant waste collector also known locally as the *Aakrikaran* or established collections points of NBD Waste⁷¹ (most of which were run privately) (Raju, personal communication 2021;Sudhakaran,personal communication,2019).

The TMC also emphasized formalized pathways of waste management to further its visions and standards of modernity of a clean and green city⁷². To this end the TMC aspired to portray extant systems as unorganized and inefficient to manage emerging consumption patterns and new materials in waste streams while pitching formal pathways as ideal alternatives.

70 mostly formed by Local Self Government body, under the aegis of the Union or State Governments

71 In many ways this process is still continuing through the latest iteration of formalization exercises via policies such as Swacch Bharat Abhiyaan(SBA). In a sense, the Kabadiwala’s of earlier are being replaced with *safai karamcharis* of today. For more on this discussion, see R.de Bercegol and S.Gowda(2019).

72 There has been an increasing tendency on the part of policy makers and administrators to aspire to create visions of urban spaces that matched an ideal type such as Singapore or that of World Class cities. For more see, A.Roy and A.Ong, (2011);A.Ghertner, (2015); de Bercegol and Gowda,(2019) among others.

d) Worldviews vis-à-vis waste

The formalization of erstwhile networks to manage streams of waste was also significantly based on an altered worldview⁷³ vis-à-vis waste. Waste in general, was no longer considered to be just a polluting agent and value-less entity. Rather, in contemporary times, waste is ascribed -by emphasising its material aspect- value in and of itself and as a component in a larger system of energy production and distribution that ,de Bercegol and Gowda(2019) argue had created a “modern nexus of the energy and waste”. The rise of Waste-To-Energy (WTE) facilities, therefore is a result of such altered worldviews, which were promoted heavily by the state as well as international lending agencies such as the World Bank/IBRD (de Bercegol and Gowda,2019).In the case of Thiruvananthapuram, such altered worldviews had influenced the TMC to view MSW in a mechanistic or instrumental way; a worldview that delinked cultural and social significance of waste in favour of emphasising its materiality.

The TMC, drawing funding from the agencies such as JNNURM and CKM, and empowered by the mandate of MSW Rules, 2000 (The Municipal Solid Wastes (Management and Handling) Rules, 2000),sought to transfigure MS Waste from a value-less pollutant to that of a resource, by establishing a centralised waste management facility in Vilappilsala⁷⁴. However, the selection of Vilappilsala and the establishment for the factory was met with much friction, which I detail in the following section.

73 This framing is drawn from the understanding of waste as an entity from which further value can be extracted.

74 Referred to locally as the factory or as the plant.

3. Analysing the Vilappilsala conflict

As described in Chapter 3, the factory was located at the *Kanikanumpara*, near *Nedumkuzhy* in Vilappilsala and occupied almost 50 acres in area at the time of its formal closure in 2015/16. The factory's existence was mired in dispute even before its establishment. Initially as part of Kerala's larger drive to site facilities for waste management, the land for the factory was acquired by the Government of Kerala in the 1990s, on behalf of the Thiruvananthapuram Municipal Corporation. The initial acquisition of 12.5 acres along with an additional 45 acres-acquired in 1999- was handed over to POABS Envirotech Pvt. Ltd⁷⁵(then called Poabsons Group) for the construction of a Biodegradable Waste Treatment Plant, on a Build Own Operate Maintain (BOOM)⁷⁶ basis.

In contrast to popular imaginations of the Vilappilsala conflict, I argue that the conflict began right from the time of acquisition of land in the 1990s and therefore can be considered to be the first episode in a broader conflict. The purchase of the land from nearby residents at the time was controversial. The residents alleged that the GoK and the TMC had claimed that the land being acquired was to be used for a herbal or flower garden(Nair, 2015). Instead, as the residents later found out, it was for the purpose of a proposed landfilling project by the TMC. As Shanthi-a former block panchayat member-points out that this was done “by tricking the poor people over there

75 Established in 1962 as Poabsons, a civil contracting firm under the leadership of the Late Mr. P. A. Jacob, the firm experienced expansive growth over the next several decades, diversifying along the way and leaving a remarkable influence across different sectors. POABSONS was later renamed as POABS Group and is today one of the leading players in the crushing industry, plantations and biotechnology. POABS business group has its headquarters in Thiruvalla, Kerala, India. With a legacy of over five decades, POABS Group has made its presence felt in various fields like Plantation, Biotechnology, Waste management, Infrastructure and Eco-tourism. For more see, <https://poabs.com/about-us/>

76 BOOM model would allow the operator to maintain ownership of the facility while the ownership of the land remained the with Government, in this case represented by the TMC. As the audit report for the CAG for LSGIs for the year 2011, puts it “if the operator decides to stop the activity he can remove the plant and handover the vacant possession of the land to TMC without any claims”. For more see, CAG(2011).

under the pretext of a flower garden” (personal communication, 2018). Ajayan, an official with the TMC however, counters, arguing that

“...it was just arguments regarding the way the land was taken. The people didn’t initially know why the land was purchased. The notification said it was for a waste disposal plant, but the local people didn’t know it at the time.” (Ajayan, personal communication, 2019).

Nonetheless, Unni-another resident of Vilappil GP and an active member of the Samyukta Samara Samithi-recalls that this led to many residents of vicinity of the factory to feeling deceived and therefore precipitated in agitating, especially near the site of the factory, 1999.

It is significant to note that the pushback from residents centred around the alleged betrayal by the TMC and the GoK vis-à-vis true purpose behind the land acquisition. It is arguable that had the land parcel been acquired for a purpose other than that of the factory’s, the nature of the pushback as it had occurred may have been different. Furthermore, as many respondents point out, the procedure⁷⁷ followed by the TMC lent strength to the residents’ grievances and suspicions. In other words, the purpose for and manner in which the land was acquired by the TMC and GoK, was as significant a driver in the conflict, which can be argued to have begun with the acquisition of the land for the factory in 1990s.

The initial episode of conflict was largely organized by residents in the immediate vicinity of the factory -who mostly belonged to backward communities(Shanthi, personal communication, 2018)-

⁷⁷ As AK(personal communication, 2019) argues the documents regarding the establishment of the factory was available at the TMC’s office in Thiruvananthapuram. However, residents in Vilappilsala dispute this and argue that even if such a document did exist, its availability in the TMC’s office ensured that most, if not all of the respondents would not have known of such a document and therefore passed without scrutiny(Unni, Personal Communication, 2018).

aided by groups such the Vilappilsala Yuvajana Samajam Granthashala (VYSG)⁷⁸- took an active role in organizing protest meetings in 1999, against the establishment of the factory. The VYSG attempted to organize the residents into a united front by convening meetings that had focused on discussing the factory, along with undertaking door-to-door canvassing for conducting protests. However, Nair(2015) points out that response for such meetings was muted, possibly due to many residents considering the factory to be a sign of ‘development’ and had hoped to gain employment at the factory. Subsequently, the protests that were organized were quelled by brutal crackdowns by the state government of the time, using heavy-handed tactics- such as lathi-charging the protestors, registering criminal cases, intimidation and so on- had resulted, the residents alleged, in the custodial death of at least one person(Nair, 2015; Unni, personal communication, 2018). The residents argued that such instances contributed to a chilling effect on the protests and protestors and therefore resulted in the agitation lying dormant for the next 5-6 years.

While groups such as VYSG was organizing protests against the factory, the panchayath however, did not oppose the establishment of the factory. Nevertheless, in order to allay the concerns of the opposition regarding the factory, a delegation consisting of members from all political parties from the panchayath as well as selected participants of the agitation, visited a similar biodegradable waste management plant in Vijayawada, Andhra Pradesh, operated by EXCEL technologies. The proposed plant in Vilappilsala was ostensibly based on the schematics of this plant.

Despite several members of the delegation raising concerns regarding the incompatibility of the

78 VYSG translates loosely to the Vilappil Youth Library, a group of individuals from Vilappilsala who established a community run library in the village. As Raman Nair(1993) points out community run public libraries such as the VYSG, have been known to have been active in public action(such as the land reform movement) in Kerala. Popularized by the People’s Library Movement, these community run libraries have not only provided access to the marginalized but also acted as spaces for the exchange of ideas and as spaces of political discussion and debates. For more see R.Raman Nair(1993).

physiological characteristics (climatic, terrain-based etc. between Vijayawada and Vilappilsala) and the nature of solid waste to be processed at Vilappilsala, the VGP proceeded with the project and entered into an license agreement with the TMC, provided the following conditions were met:

1. The factory must be covered to avoid birds from scattering waste in the vicinity
2. The factory must have a concreted floor and the effluents from the factory must be diverted through proper channels
3. The waste transported to the factory was required to be segregated beforehand and Plastic and other non-biodegradables had to be separated from the compostable garbage with a sustainable system for the disposal of non-biodegradable waste (“Karmachandran and Others Vs. The State of Kerala and Others,” 2012; Nair,2015).

On 22nd December 1999, the TMC and POABS Envirotech entered into agreement to operate the factory. As per the Memorandum of Understanding (MoU) that the TMC signed with POABS Envirotech stipulated that the TMC was responsible for collection and transportation of Biodegradable Municipal Solid Waste from areas under its jurisdiction to the factory premises. The factory was designed to operate using aerobic⁷⁹ conversion method with mechanically turned windrows, a process which took a total of 30-35 days; the factory was divided into 7 sectors with over 30 rows that were turned manually. On arriving at the factory, the waste was mixed with accelerating agents (composed of microorganisms) to make the process faster and more effective (Subair, 2018). As per the original agreement this waste was to be treated and converted into bio-manure and was to be sold to Fertilizers And Chemicals Travencore (FACT) by POABS Envirotech, paying the TMC 2% of the selling price, as royalty (Nair, 2015). The rejects from the

⁷⁹ Aerobic composting refers to the process where waste, in the presence of oxygen, composts to produce CO₂, Methane, Nitrous Oxides along with water. Depending on the quality of the waste being treated, the liquid (also known as leachate) that is produced can be toxic in nature and is a potential pollutant.

biodegradable waste were to be shifted from the composting area into a ‘capping’⁸⁰ area where the non-biodegradable waste was dumped, while the leachate from the landfilling was to be collected into dedicated wells.

However, circa 2006, residents near the factory began to report foul odours emanating from the factory premises, along with the appearance of polluted waters in their own backyard wells. The residents complained of various ill-effects from the factory’s effluents that flowed into their water sources. Incidences of skin diseases, respiratory problems were reported by the residents. These concerns were largely ignored by the TMC as well as the VGP and the TMC allowed for the collection and transportation of waste to continue in order to capitalize on the royalties derived from the sale of the treated waste. However in 2007-08 POABS Envirotech, citing operational losses, decided to pull out of the project and to abandon operations at the plant. Subsequently, the GoK(through its order (MS)16/08/LSGD dt.15.01.2008)allowed the TMC to take over the plant from POABS group. With the collapse of the agreement with POABS, the factory had turned into a dump-yard, which the Centre for Environment and Development (CED)-an accredited agency of the GoK for Solid Waste Management - was appointed to resolve and oversee the factory’s day to day operations. In addition to managing day-to-day operations of the factory, CED was tasked with capping the waste that had already been collected as well as the day-to-day waste still being collected by the TMC, at the factory.

Parallely, residents from the vicinity of the factory had begun approaching the VGP with

80 The capping process, involves the creation of a deep pit which is layered with an impermeable layer of 1500 micron thickness, High Density Poly-Ethylene(HDPE) lined with clay(a prescribed thickness of 140cm). The non-biodegradable waste is spread out on the to this layer and completely covered with earth, the pit is ventilated with plastic pipes for escaping gas and for leachates that may be produced. This process can be continued till the mound reaches a certain height and is then capped off with a layer of topsoil and grass.

complaints and petitions regarding the pollution, they argued was due to the production of toxic leachate (from untreated waste that continued to amass in the factory premises) mixing with the water from *Meenampally thodu* that originated near the factory premises⁸¹. Following several such petitions, in 2009, the residents of Vilappilsala began to organize protests anew. In contrast to the previous episode, the residents began to convene meetings that discussed the tangible hardships that had increased in magnitude, due to the factory's presence in their lives.

While these meetings were initially organized by the Janakeeya Vikasana Samithi (JVS) and the Federation of Residents' Association Vilappil (FRAV)⁸², the formation of the Janakeeya Samara Samithy (JSS) also known as Janakeeya Samithy⁸³, marked the formalization of the agitations. The Janakeeya Samithy represented an umbrella organization and was comprised of a collection of individuals and groups that shared the common goals of raising the matter of the factory and consequently ceasing its operations in Vilappilsala. With over 125 units that spread rapidly across the five panchayaths of Poovachal, Vilappil, Vellanad, Aruvikkara and Vilavoorkkal, the Janakeeya Samithi organised meetings that were thrown open to all residents in the villages mentioned above and aimed to provide a forum for the residents to discuss their grievances with respect to the factory and to deliberate further courses of action. Shilpa further points out,

81 Interestingly, One of the key provisos worked into the MoU was that of a penalty for failure to deliver a set quantity of waste, in this case the quantity was fixed at 300 MT-a figure based on the an estimate by the a study conducted by Dr. Babu Ambat under the auspices of Centre for Development Studies (CDS) in 1998- failing which the TMC was liable to pay POABS Envirotech a compensatory amount of Rs.49999/- per day till the quantity was reached.

82 Both these organizations were precursors to the later Janakeeya Samara Samithi (JSS).

83 Also called the Janakeeya Prathiroda Samithi, the JSS in 2011-12 split into the Samyukta Samara Smithy (SSS) and the Janakeeya Samara Smithy. The SSS was comprised mostly of VGP members and the JSS with ordinary individuals.

“...we started organising people into units in each ward, like how the DYFI⁸⁴ does. The leadership of that unit was given to a person from that ward”(Shilpa, personal communication,2021).

In other words this episode of the conflict was marked by widespread mobilization as well as a palpable shift to hold the TMC(and for some parts the GoK) accountable, vis-à-vis its failures regarding the factory. For instance, the LSG elections of 2010 infused renewed vigour, with the factory being one of the core issues of the elections(Shilpa,Personal Communication,2021).

In addition to the widespread mobilization of residents, this episode was significant for the tactics used by the agitators. The protestors employed various tactics to register their protests, including sloganeering, picketing, and protest marches and *Hartal*⁸⁵. For instance, protest marches were organized from *Samara panthals* - bases of operations for the agitation- to first the panchayath and then to the TMC’s headquarters and to the Secretariat, in Thiruvananthapuram city(covering approximately,40 KMs). Similarly, the residents set up similar such *Panthals* at *Nedumkuzhy* junction, close to the factory and near the *Sreekanda Sastha* Temple in Peyad(2 KMs from *Nedumkuzhy*). Babu (personal communication,2021) a former member of the protesting group, observes:

“Every family from the village would go there and protest for one day, the next day the next family would go. When a family is protesting there, the nearby people would go there and support them. So, the families were never alone. As the support increased, we shifted our protest booth from there to the next junction near Vilappilshala temple. Then people from

84 Democratic Youth Federation of India

85 Hartal refers to observing shutdown of the business. In this case when the JSS would call for a hartal,all shops and establishment of business would observe closure in solidarity.

nearby panchayats, nearby Panchayat Presidents also came to the protest booth and supported us”.

By the latter half of 2011, the protests had intensified in their nature, prompting the TMC to initiate parleys and discussion with the agitators. However, by beginning of October 2011, following multiple failed parleys with the TMC, the Janakeeya Samithi decided to adopt the tactic of blockading the trucks coming in from the city into Vilappilsala, along with locking the gate of the factory, indicating an escalation in their tactics. David (personal communication,2022) points out that they used different strategies for this blockade:

“We blocked all the side roads... We set fire in the roads using twigs and coconut husks... the situation was such that the waste carrying trucks could no longer enter here”.

On 12th of October 2011, Shilpa (UDF)⁸⁶, the newly elected President of the Vilappil Grama Panchayath, protesting inaction from TMC’s side, announced that she along with several members of the Janakeeya Samithi would undertake hunger fasts in order to bring the issue into the GoK’s attention. When Shilpa, along with four other members were arrested by the police, however, other members of the Samithi took over the fast and continued the agitation. Following this the Samithi was invited to negotiations with the TMC that was mediated by the Chief Minister, Oommen Chandy in the following week. In this meeting, the State government⁸⁷ proposed that the current factory be allowed to operate for the next six months and that the TMC would make efforts to find alternative areas for shifting the factory, in the meantime. The Samithi countered by rejecting the TMC’s and GoK’s proposals and gave the government three months’ moratorium vis-à-vis the

86 United Democratic Front

87 With Deputy Mayor, N Sakthan representing the TMC

blockades, failing which the protests were to continue. Consequently, the protests were put on hold for the next three months.

However, these negotiations did not fructify and by the intervening week of December 2011 and January 2012, the protests had resumed. Trucks from the city were once again blocked by the protestors along with other tactics employed earlier. This round of protests culminated in the VGP- under the leadership of Shilpa- forcibly closing the gates to the factory (CAG,2011), effectively blocking the TMC from transporting anymore waste into the factory premises and shuttering the factory, *de facto*.

3.1.Legal Challenges

As the political avenues for resolving the conflicts shrunk, resolutions were pursued in the legal arena. Indeed, the second episode of the conflict is also marked by the significant role played by the Courts and the legal system. Beginning with the Ombudsman for Local Self Governments, the High court of Kerala and later the Supreme Court of India, both parties filed petitions and counter petitions arguing their respective cases.

In 2011, the TMC had filed for protection against the Panchayath President and against the JSS and SSS respectively (“The Corporation of Thiruvananthapuram Vs. The State of Kerala and Others,” 2012a) in the High Court of Kerala. The major reasons for this included, the physical closure of the factory as well as the blockading of trucks carrying waste to the factory. In a setback to the agitators the High Court of Kerala, was inclined to grant the TMC favourable judgements such as the one on 23rd January 2012; (“The Corporation of Thiruvananthapuram Vs. The State of Kerala and Others,” 2012; “Sobhanakumari S& Anr Vs. Corp.of Thiruvananthapuram,” 2012). In this judgment, the High Court ruled in favour of the TMC and allowed the transportation of waste from the city to the factory. To ensure that this happens, the High Court ordered Police protection

to the trucks carrying waste.

However, the police were faced with stiff opposition from the agitators and in the reply affidavit to the High Court of Kerala, argued their inability to carry out the orders given by the HC(“Sobhanakumari S& Anr Vs. Corp.of Thiruvananthapuram,” 2012). Pursuant to this, the VGP through the SSS, appealed to the Supreme Court of India, however, the apex court denied the VGP’s pray for stopping the entry of the trucks into Vilappilsala. Echoing the High Court of Kerala’s decision, the Supreme Court(vide order dt.17th of April 2012), directed the Government of Kerala to ensure that trucks with waste entered into Vilappil Grama Panchayath boundaries and proceeded to the factory. The Supreme Court also instructed the Government of Kerala to ensure escorts to these trucks in the form of State Police escort or Central Reserve Police Force (CRPF) escort. However once again, the police were unable to make any progress due to the heavy picketing by the protestors who formed human chains to block the entry of the police and the trucks, and the GoK was therefore, unable to comply with the order.

Nevertheless, the High Court of Kerala, in a separate judgement, appointed the Meera Commission to inquire into the status of the factory and to look into the claims of the protestors and submit its report. The Meera Commission visited the factory in January 2012(Advocate Commissioner K Meera, 2012) and made the following observations:

- 1) The Commission, gave a physical account of magnitude of waste and pollution, noting that the leachate oozing out of the mounds of treated and non-treated waste was making its way into the *Meenampilli thodu* and producing a foul smell in the vicinity.
- 2) The Commission also noted the subpar utilization of capacity, for example ,the quantum of waste being delivered to the factory was approximately 110 MTs as opposed to the officially declared capacity of 300 MTs.

- 3) The Commission also noted that the ratio of Biodegradable to Non-Biodegradable waste was skewed towards the latter and therefore hampered the production of bio-fertilizer.

The Meera Commission's report was bolstered by a report by the O/o District Medical Health Officer of Thiruvananthapuram certifying that,

“the malignant water coming out of the landfill area is collected at steep ponds near then[them] through PVC pipes... It is also confirmed directly by the ADMO that the liquid condensed filth that flow from the plant reach *meenampalli thodu* [w]hich reach[es] *Karamana* river. Those inhabitation[inhabitants] of the area who touch the *meenampalli thodu* have been seriously affected by itching skin diseases and various forms of allergy(“Karmachandran and Others Vs. The State of Kerala and Others,” 2012).

Parallely, pursuant to a compliance audit conducted by the CAG⁸⁸, on LSGIs in Kerala for the year 2010- 2011(CAG, 2011), found significant faults with the factory's design and its management. The lapses were categorized into the following:

Issues	Elaboration
Operational	a. The report noted that despite the advertised capacity of the plant (i.e. approx. 156 tonne) was much lower than the anticipated requirement (i.e. 300-350 tonne) b. The solid waste being transported to the plant was of unsegregated and mixed character. The waste transported also included construction and other non-biodegradable waste. c. The plant did not adhere to the stipulations for aerobic conversion, in terms of specifications needed for the windrows in terms of height, width and length of the rows. This led to longer conversion times, while simultaneously undergoing anaerobic conversion due to the longer conversion producing significantly more leachate and foul odour and consequently reducing the efficiency rate from 50% to 12%
Statutory	The operator of the plant (POABS Envirotech), failed to secure or continue to secure the necessary permissions from the necessary authorities, crucially that of the Vilappil Grama Panchayath (VGP) and State Pollution Control Board (SPCB)
Contractual	a. In the light of increased leachate production, the operator of the plant did not make efforts to contain this leachate. Instead, the

88 Comptroller and Auditor General of India .

	leachate was allowed to flow into nearby water sources, contaminating it in the process. b. The operator also failed to set up a Sanitary Land Fill (SLF) in order to contain the volume of rejects from the aerobic conversion process.
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Table 5. Issues identified in report by O/o CAG

The CAG's report was significant in terms of highlighting the lapses in the functioning of the factory. In the process the report underscored the magnitude of these lapses (in Table 5) as well. For instance, the report specifically points out that due to the lapses in the treatment of waste materials, leachate that was formed was allowed to run into nearby freshwater stream such as the *Meenampally thodu*, originating near the factory's location. This stream formed part of a larger network of tributaries of the *Karamana* river. While the *Karamana* river provided much of the drinking water for the city of Thiruvananthapuram, the residents of the Vilappilsala relied on the *thodu* for daily usage, with it also playing a part in the recharging of the households' wells. The flow of leachate into the *thodu* resulted in the pollution of the stream as well as the contamination of nearby water sources. Similarly, the report notes that despite knowing about the leachate from the factory polluting nearby water bodies, the provider viz, POABS Envirotech failed to take any effort to stop this leachate flow. Extending its criticism of the POABS' failures the report admonishes the provider for not securing permissions from the Vilappil Grama Panchayath or from the State Pollution Control Board. However, the report placed some amount of blame at the TMC's feet as well, observing that the nature of the waste being transported to the factory was not biodegradable as it was supposed to be but that it contained non-biodegradable waste as well including construction waste, thereby disrupting the functioning of the factory.

Armed with the reports of the Meera Commission as well as the CAG's report, several members

of the JSS and SSS filed writ petitions at the High Court of Kerala and the Supreme Court (on appeal) (“Karmachandran and Others Vs. The State of Kerala and Others,” 2012). Subsequently, several cases relating to the Vilappilsala factory were clubbed and transferred by the regular bench of the Supreme Court to the National Green Tribunal’s Chennai bench.

In 2015, marking a landmark reversal the National Green Tribunal’s Chennai Bench ruled in favour of the protestors. The court noted that, “on the factual matrix of the case, either under the Constitution of India or MSW Rules, the Thiruvananthapuram Municipality [TMC] has no manner of right to put up its MSW Plant in Vilappilsala Panchayat.” (“Vilappilsala Samyuktha Samara Samithi Vs. State of Kerala and Others,” 2015).

Furthermore, the NGT established that the plant *prima facie* was set up and had operated in a manner that was in violation of established rules, without the involvement and consent of Vilappil Grama Panchayat in 2000. The court also noted the State Pollution Control Board’s report confirmed the leachate flowing into the nearby freshwater streams and consequently rejected the TMC’s contentions. Additionally, the court also declared that “setting up of MSW Plant by the Corporation at Vilappilsala Panchayat is illegal and the same is to be removed by the Corporation;” (“Vilappilsala Samyuktha Samara Samithi Vs. State of Kerala and Others,” 2015). Directing the TMC to cease all operations at the factory, the NGT further instructed the TMC to undertake steps to remedy the factory premises with “topmost priority” (“Vilappilsala Samyuktha Samara Samithi Vs. State of Kerala and Others,” 2015). Following the directive by the National Green Tribunal to close down the factory and in the face of rising pressure from the general public—including many residents in the city— and political parties, the Government of Kerala, advised the TMC to completely cease all activity at the factory in Vilappilsala. Consequently, in 2016, the TMC passed a resolution to formally close the Vilappilsala factory and to cease the transportation of any and

all waste to the site, although it is to be noted that much of the machinery still remains in the factory confines to this day.

3.2.Epilogue: MSW management in Thiruvananthapuram after 2016

The shutdown of the factory meant that the TMC, faced with managing the backlog of MSW within its jurisdiction was forced re-evaluate its existing approach to collection, management and disposal of MSW in the city. In contravention to policy directives and schemes of the Union Government -such as JNNURM (precursor to the AMRUT scheme) -which encouraged centralised TSDFs and WTE facilities, the TMC undertook steps toward decentralising MSW management in the city⁸⁹. A filing with the High Court by the TMC in 2012 explains some of the steps towards decentralisation that were undertaken:

“Taking into consideration the sentiments of the people of the locality the Corporation has initiated source level treatment of waste at its place of origin and is implementing a project of 0.80 cr. for the same. In view of the present situation the Corporation is also finalizing a project for source treatment covering 1 lakh houses on a campaign mode. Making use of the ordinance issued by the state Government on 25th November 2011, the Corporation has made it mandatory for all commercial establishments, hospitals, markets, slaughter houses, chicken stalls, marriage halls, flats, houses having more than three floors, hotels with more than 20 seats and offices with more than 50 staff to establish their own solid waste treatment plants by 28th February 2012. These actions are expected to substantially reduce the quantity of waste reaching the centralised facility at Vilappilsala.” (Advocate Commissioner K Meera, 2012).

Adv. Janaki, TMC’s former mayor,(personal communication,2022) confirmed such a shift,

⁸⁹ Although Sharada, an official with the Union Government, pointed out that this encouragement was made more or less implicit in the wake of the Vilappilsala conflict(personal communication, 2018).

remarking:

“see, Vilappilsala was the sole waste management plant in Trivandrum. Since it had stopped functioning the waste in Trivandrum has been tackled differently. During my tenure I had focused on providing alternatives to centralized waste management and to focus on decentralized waste management. Trivandrum now follows decentralized waste management”.

The Vilappilsala conflict had demonstrated the shortcomings of a centralised strategy towards waste management and disposal. Santosh,(formerly of the environmental NGO in Thiruvananthapuram, Thanal)sums up Vilappilsala conflict’s impact thusly:

One impact was that with the failure of the Vilappilshala waste plant everyone in Kerala became completely against the idea of centralized waste management. Not just in Trivandrum, be it any place in Kerala. If anyone comes up with such an idea then the immediate question would be that are you trying to make another Vilappilshala?(Santosh,personal communication,2021).

Benoy, an official with the TMC, concurs, arguing that :

“a lot of policy changes happened because of that. In 2011 Vilappilshala issue came up and in 2013 [Kerala Panchayati Raj]Act was amended. Till then it was said that waste was the asset of Corporation then it was changed to My Waste My Responsibility.” (personal communication,2022).

In summary the conflict in Vilappilsala reflects the four interlinked phenomena vis-à-vis waste in Thiruvananthapuram and Kerala. Changes in consumption patterns and material modifications in the waste stream have led to shifts in waste management policies as well as networks for management of waste. Consequently ,policies implemented by the Government of Kerala and the TMC have shifted perception of waste from a socio-political one to that of a technical issue. The

resolution of the conflict primarily occurred through legal intervention rather than administrative or political channels. The environmental vantage point applied by the NGT in contrast to a civil vantage point adopted the High Court and Supreme Court, respectively, I argue, was one of the fundamental reasons-along with the TMC's highhanded tactics as well as its failure for accountability regarding the factory's operations- that ultimately led to the reversal in the favour of the agitators. Furthermore, the NGT's landmark reversal and the TMC's resolution were significant in that they not only provided a form of finality to this episode of the conflict, it also upheld the consistent claims made by the agitators. This resolution also halted the acrimony and the conflict in the form it had been proceeding since 2009. Finally, the closure of the factory also resulted in the TMC to officially pivot to a policy of decentralised approach to MSW, shifting away from the erstwhile centralised management practices⁹⁰, an approach that had persisted till date.

Contextualizing the Vilappilsala conflict, in terms of the broader practices and policies helps to unveil the evolving dynamics between individuals and organizations. It also helps to shed light on the material and non-material significance of the sociomaterial of waste in the context of Kerala as well as Vilappilsala. In the following section, I turn my attention to analysing the strategies and tactics used in the Vilappilsala conflict from the vantage point of Contentious Politics.

90 Although Sharada, an official with the Union Government, pointed out that this encouragement was made more or less implicit in the wake of the Vilappilsala conflict(personal communication, 2018).

4. Contentious Politics in Vilappilsala

One of Political Ecology's foundational concerns-subsequently adopted by UPE- involves the study of conflict. As Le Billon and Duffy (2018) observe, "understanding conflicts is a prime focus of *political ecology*". In fact, as discussed in Chapter 2, the centrality of conflict to Political Ecological enterprise is well documented (Bryant, 1998; Robbins, 2004 ;Le Billon, 2015; Le Billon et al., 2018). However, engagement(of Political Ecology and UPE) with scholarship vis-à-vis organisation and mobilisation-especially in the 'first generation' of Political Ecology (Paulson et al., 2003) has been relatively sparse. Le Billon(2015) argues that Political Ecology- by choosing to focus understanding power relations in terms of access to natural resources or in terms control over means of production (Watts 1983 as cited in Paulson et al., 2003)-has often by passed the task of understanding how these conflicts create opportunities to mobilise, organise, and make claims. Furthermore, the literature on environmental conflicts in India is illustrative of the influence of either the Resource Mobilisation(McCarthy & Zald, 1977) or the Political Opportunity Structure approach(Gamson & Meyer, 2009). Scholars such as Omvedt(1987); Bandyopadhyay & Shiva,(1988);Karan(1994);Shah,(2004) have used these theories to focus much attention to explaining the reasons that these conflicts arise and are borne out.

However, these approaches have come under criticism for the following reasons:

- 1) The overemphasis of on one or two dimensions of collective actions, for instance access to resources in terms of the Resource mobilisation theory and institutional mechanisms with respect to Political Process theory.
- 2) The relative neglect of cultural and social factors that these theories often describe as non-rational/irrational.

In order to overcome these shortcomings, I have turned to adapting the Contentious Politics approach- developed by McAdams and Tilly(2004) and later refined by Tilly and Tarrow(2015)- to operationalize UPE's tenets and analyse mobilizations and organization in conflicts such as that in Vilappilsala. By probing the organisational aspects of the Vilappilsala conflict, this thesis joins Watts'(2003) and Walker's(2007) calls toward placing emphasis on the Political in Political Ecology(and UPE). I argue that such an emphasis would lead to unearthing multiple, often contentious viewpoints. Accordingly, in the following section, I analyse the strategies and tactics of mobilization in the Vilappilsala conflict, through the Contentious Politics framework.

4.1.Elements of contentious politics

Charles Tilly and Sidney Tarrow in *Contentious Politics* (2015)-a refined and extended version of Douglas McAdam and Charles Tilly's *Dynamics of Contention*(2004)-define Contentious Politics as being comprised of "interactions in which actors make claims bearing on other actors' interests, leading to coordinated efforts on behalf of shared interests or programs, in which governments are involved as targets, initiators of claims, or third parties" (Tilly and Tarrow,2015).Often these conflicts were framed in terms of either conflicts around access and/or mobilisation of resources or were analysed these conflicts in terms of the interaction with institutions of the State. However, Tilly and Tarrow(2015) argue that relatively less attention has been paid to understanding the mechanism and processes involved in the mobilisation and organisation aspects of such conflicts and position the Contentious Politics framework as an approach that emphasizes the various mechanisms of contentions as well its equal emphasis on the processes that undergird such conflicts⁹¹.

The central departure of the Contentious Politics approach has been its emphasis on the

⁹¹ It is therefore, also referred to as the Mechanism-Process approach.

construction of the context of conflicts which is often expressed in the techniques used by various stakeholders in addition to the general mechanisms of organisation. Furthermore, the Contentious Politics framework is also significant for its emphasis on non-rational approaches to group action and to social conflicts, stressing that collective action is multifaceted and therefore, analysis of such phenomena cannot be based on the neglect of cultural and symbolic factors. Therefore, I argue that a Contentious Politics framework, applied to the Vilappilsala conflict would not only unpack the tactics and strategies used by different stakeholders such as the protestors, the Government of Kerala, the State Police, the TMC but also unpack the differing logics regarding waste and its management in Thiruvananthapuram and Vilappilsala.

In advancing the Contentious Politics framework, Tilly and Tarrow propose a two-fold process of analysis -of description and of explanation. To facilitate this analysis, they detail a set of ten descriptive concepts, along with an additional ten explanatory concepts:

Descriptive Concepts		Explanatory Concepts
Government		Sites of contention
Political Actors		Contentions
Political Identities		Streams of contention
Contentious politics		Outcomes
Contentious performances		Regimes
Contentious repertoires		Political Opportunity Structure
Contained contention		Mechanisms
Transgressive contention		Processes
Institutions		Episodes
Social Movements		Cycles of contentions
a) Social Movement campaigns	b) Social Movement bases	

Table 6.Descriptive and Explanatory concepts in Contentious Politics

Source: Tilly and Tarrow (2015)

A description consists of “specifying what special properties and variations in contention deserve serious attention”, whereas explanation involves “showing what produces those special properties and variations” (Tilly and Tarrow, 2015). Together, description, and explanation account for

Contentious Politics (Table 6). The authors also point out that each of these elements of Contentious Politics may not always be apparent or amenable to analysis for all contentious episodes and/or larger collective action. The authors point out that these descriptive and explanatory concepts often appear in combination and are ideally meant to represent archetypes for analysing collective action. Accordingly, in Vilappilsala's case, based on the context as well as the strategies used by the various stakeholders, I have adapted and re-organised elements of the CP framework as illustrated in the table below.

Explanatory concepts	Descriptive concepts
Sites of contention	a. Government b. Political Actors and Political Identities c. Contentious performances and Contentious repertoires
Streams and Episodes of Contention	a. Transgressive contention b. Disruptive contention c. Conventional contention
Mechanisms	a. Brokerage b. Diffusion c. Competition or Coordinated Action
Outcomes	Identity Shift

Table 7. The elements of Contentious Politics in Vilappilsala

Contentious Politics framework, when applied to the Vilappilsala conflict, shows that explanatory and descriptive concepts have combined in ways different to the ones indicated by Tilly and Tarrow (2015). As table 7 illustrates, the stakeholders in the Vilappilsala conflict have engaged in claim making at several levels within the existing democratic political regime along with judicial remedies to advance their claims. This included using and adapting techniques that were drawn from other conflicts to make headway and alliances across political parties and communities. Accordingly, the elements (both descriptive and explanatory) of the CP framework, provides insights into the mechanisms and processes of the contention in Vilappilsala, by

unearthing and highlighting a network of cross-cutting processes and mechanisms.

I. Sites of contention: Beyond physical registers

The sites of contentions ,within the CP framework, are significant elements in the processes of contentious action. Sites of contentions, according to the authors, refer to “...human settings that serve as originators, objects, and/or arenas of contentious politics...”. These sites may be varied ,as they can “...[include]human individuals, but they also include informal networks, organizations, neighbourhoods, professions, trades, and other settings of social life.” In other words, sites of contention being “arenas of contentious politics” can transcend physical locations in terms of social organization and involve institutions as well. In Vilappilsala’s case, the conflict involved several sites of contention. Of these sites of contention, three sites -instrumental in describing the conflict- are examined, wherein the first two sites of contention, namely government, political actors and political identities are examined for their role in shaping policies, defining political norms and mainly represent structures of power and decision-making. Whereas the third site of contention i.e. the contentious performances and repertoires represent the public displays through which claims are made and articulated.

- a) *Government*: within the CP framework, *government* is taken to mean organisation(s) that control primary means of coercion and exert priority over other organisations within a given territory, such a reading of government also includes various bureaucracies, the army as well as the Judiciary. In Vilappilsala’s case, Government as sites of contestation involved organisations such as the TMC and VGP, the GoK(through the ministries of LSG, Health, Women and Child Development), agencies of the GoK such as the Kerala State Pollution Control Board (KSPCB), Trivandrum Development Authority (TRIDA), Centre for Environment and Development (CED). The High Court of Kerala, the Supreme Court

and the National Green Tribunal were also significant and prominent sites of contention.

- b) *Political Actors*: refers to groups that take part in contentious politics, this includes groups that are directly/indirectly connected to the state as well as those that are not. In the context of the Vilappilsala conflict, Political Actors refers to groups that include governmental and non-governmental organisations such as the Janakeeya Samara Samithi (JSS) and the Samyuktha Samara Samithi (SSS), the Vilappil Grama Panchayath, the TMC, political parties such as the SUCI, CPI(M)⁹². The *Political Identities* espoused by these groups is tied to activity of claim-making, involving the framing and articulating of claims which in turn forms the basis of the identity of a certain group. For instance, the JSS and SSS articulated engaged in claim-making on behalf of victims of pollution and the residents of Vilappilsala and therefore identified themselves as agitators.

Thus, sites of contention such as government, political actors and identities are significant because they represent conventional structures of power which-through policy and legislation-are able to enforce decisions.

- c) *Contentious performances and repertoires* : approaches contentions and collective action as performative activities. At Vilappilsala, the agitators relied on conventional tactics ranging from picketing and protest marches and rallies to engaging in sit-ins (sometimes called *dharanas*) and holding vigils. Additionally the agitators also engaged in occupying several important junctions in Vilappil by constructing several *samara panthals* spread across the larger Vilappil area. The usage of *panthals* was a crucial tactic employed by the agitators where these *panthals* were used as bases of operation, to hold public talks and to organise meetings that ran throughout the night to engaging in blockades of the trucks

⁹² Communist Party of India (Marxist)

carrying waste to the factory. These *panthals* ensured the visibility of the agitators and worked toward sustaining their relevance in the popular discourse in both the city as well as back in Vilappil.

It is significant to note that the Vilappilsala conflict saw the utilisation of several sites of contention. The agitators' contentious performances were not limited to local sites such as the VGP's office in Peyad, but included protest marches and bicycle rallies that reached relatively far off places such as the TMC's HQ in *Palayam*, Thiruvananthapuram, whereas the TMC mostly relied on GoK, the Kerala Police and the judiciary as sites of contention to make their claims. Similarly, the contentious performances by the agitators were also context specific and noteworthy. For instance, on 3rd of August 2012, the agitators held a *Pongala* in Vilappilsala, a Hindu religious practice in Southern Kerala.⁹³ The *pongala* served two purposes, firstly as a form of blockade to stop the truck from Thiruvananthapuram, secondly, it was also a defiant assertion of the agitators' political identity, signalling their will to resist the TMC's efforts to continue using the factory. In addition to the *pongala* the agitators also took out a children's march in Vilappilsala, where several babies were held aloft to underscore the high stakes of the conflict (The Hindu, 2012). During a conversation in *Nedumkuzhy* a shop keeper referred to this children's march as one of the iconic moments of the conflict, recalling that one of the children in this march was that of Bhaskaran's, the then-president of JSS (Fieldnotes, January 31 2018).

93 A pongala is the practice of communal cooking and is mostly associated with the Attukal Pongala, a ritual practiced by Hindu women in areas of erstwhile Travancore, such as Thiruvananthapuram and Kollam. Pongala's almost exclusively conducted by women, who cook offerings- usually rice based and offer it to the deity in Attukal- in an earthen pot, mostly in public space such as temple grounds or sometimes in front of their houses. For a detailed discussion on Attukal Pongala, see D, Sreedhar(2015).

These tactics together shed light into the different sites of contention employed by various stakeholders in the Vilappilsala conflict.

II. Streams and Episodes of contention: Temporality in Contentious politics

While the sites of contentions represents spaces where the conflict plays out, Episodes of the contention along with Streams of contention, together, denote the temporal facet in Contentious Politics. In contrast to the approaches of Political Opportunity Structure and Resource Mobilisation, Tilly and Tarrow(2015) argue that conflicts or contentious action often manifest in episodes, which taken together can represent streams of contentions. Therefore, streams of contention would represent “sequences of collective claim at or across those sites making singled out for explanation”, (Tilly and Tarrow, 2015). In Vilappilsala the struggle against the factory while episodic also represented continuity in terms of the issues raised. For instance, the initial phase of the conflict can be said to have emerged around 1991 while the second phase could be seen to have emerged in 2009, with a time gap of approximately 15 years. While it would appear that there is a significant gap between the first and second episodes of the conflict, the argument here is not to emphasize the time gap instead to note a continuity of issues raised in the earlier episode that have continued to the successive episode. Placed together, the episodes of the conflict, suggest escalation and continuity with very little evidence of ruptures or separation. In other words, it is important to understand that conflicts such as that of Vilappilsala are not isolated in time, rather they can be viewed as parts of larger conflicts unfolding in episodic fashions.

Therefore, Tilly and Tarrow(2015) refer to Episodes of the contentions as “bounded sequences of continuous interaction, usually produced by an investigator’s chopping up longer streams of contention into segments for purposes of systematic observation, comparison, and explanation.” (Tilly and Tarrow, 2015). It is significant to note that while Tilly and Tarrow attribute the

‘framing’⁹⁴ of the stream of contention (into episodes) to the investigator, it is equally important to note that such frame can also be a result of the respondents themselves categorizing the stream of contention based on a certain axis. This has been the case in Vilappilsala, where respondents from the field have recalled the events as episodic (often linked to media reportage) as shown in Figure 6.



Figure 6.A linear representation of Vilappilsala conflict.

Compiled by the author (2020)

This recall of the Vilappilsala conflict has been largely dependent on the nature of the tactics used in each of the episodes. In the first phase of the conflict, the respondents reported that the protestors

94 Drawn from the works of the Snow and Benford and Gamson, in social movement studies, this episodic breakdown is termed as ‘framing’. For more see, W.Gamson(1990); D.Snow and R.Benford(1992).

were engaged in confronting the state government mostly relying on disruptive contention⁹⁵ (Tilly and Tarrow, 2015). The second phase however was reported to have employed a combination of disruptive and transgressive contentions. For instance, the President of the Vilappil Grama Panchayath lead a delegation of protestors to the factory and proceeded to lock the gates of the factory, denying physical access to the trucks and disrupting the functioning of TMC vis-à-vis waste management. Similarly, the episodes of contention can also take the form of violent conflict or transgressive contention. For instance, Vinayan (2015) recollects an episode of violent conflict in 2012, during the ongoing blockades of the trucks carrying waste to Vilappilsala:

“A tense atmosphere prevailed at the place. Even then women and children lay on the road locking their hands with each other’s... News spread that the police were dragging women and children through the roads. This resulted in violence breaking out on the Peyad – Vilappilsala road. People carried stones, wooden logs ...to the middle of the road and blocked it. They set fire to tyres and other things, in the middle of the road. When the police came to remove these, they were pelted with stones. The police charged at the people with their lathis but was futile. People continued pelting stones against the police. The police were[then] forced to use tear gas shells.”

However, my respondents have stressed that instances of transgressive contention in the context of Vilappilsala has been limited, instead, they point out that the agitators chose to rely mostly on disruptive contention tactics to make their claims.

95 Disruptive contention means the employment of techniques such as *dharnas* (sit-ins) or picketing causing disruption to normal functions. Tilly and Tarrow note that disruptive protest often “leads to policy reactions and sometimes bleeds into violence”. For more see Tilly and Tarrow, 2015.

III. Mechanisms: Strategies and tactics

Mechanisms play an important role in Contentious Politics, they detail the various steps and actions involved in contentious action. In the case of Vilappilsala, three major mechanisms were seen to be at play, namely the mechanisms of the Brokerage, Diffusion and Coordinated Action. The tactic of *Brokerage* refers to “...the linking of two or more previously unconnected social sites by a unit that mediates their relations with one another and/or with yet other sites” (McAdam et al., 2004). In Vilappilsala’s case indirect groups such as Thanal, SUCI⁹⁶ and SEWA⁹⁷- through their training and skilling campaigns- helped to connect participants of the training who were mostly affected by the factory leveraged the training sessions to not only discuss Vilappilsala, but also to search for allies who were similarly affected and were sympathetic to their cause. For instance, Sudhakaran-as part of Thanal’s capacity building programmes was conducting technical training at that time for women in *Chowalloor* ward-recounts a juncture in the training process :

“...and then at one critical point the question came, if this is how things should be, then why Vilappilsala? and the Vilappilsala plant was situated in one of these 4 wards. Finally, it went into such a stage that even we could not handle it. They said without discussing Vilappilsala, what are we trying to do with the training, we must discuss Vilappilsala. So, one day there was a big discussion and all of them came to the decision that it must be shut down.”
(Sudhakaran, personal communication 2019).

96 SUCI stands for the Socialist Unity Centre of India

97 SEWA is a women’s self-help NGO working toward the empowerment of women on a national level

Successfully using the mechanism of Brokerage resulted in the spread of the contention, in a mechanism CP framework terms *Diffusion*⁹⁸. For instance, according to Bhaskaran(personal communication,2018) of the JSS ,SUCI was instrumental in helping the protestors organise and mobilise by helping them establish over 100 units in nearby villages and panchayats to campaign and undertake non-violent protests methods. Within the CP framework these mechanisms can occur in an overlapping fashion as in this case Diffusion, along with Brokerage worked to aid the agitators in the process of mobilization. Through the trainings organised by Thanal and SEWA, stakeholders established relationships and brokered new alliances that resulted in the mobilisation of units, spreading the contention from Vilappilsala to nearby villages.

A third mechanism observed in the Vilappilsala conflict pertains to the split of the Janakeeya Samithi- which till 2012, presented a united front- into Samyukta Samara Samithi (SSS) and the Janakeeya Samara Samithi (JSS). The split of the Janakeeya Samithi into JSS and SSS in 2012, into rival factions within the broader agitating groups, offers insight into the complicated and counterintuitive nature of groups and coalitions in contentious action. Kim Fortun (2001), in her work on the aftermath Bhopal Gas Tragedy, challenges the traditionally held conception of ‘stakeholders’⁹⁹ as units of claim making, instead advocating for a grouping she calls ‘enunciatory’¹⁰⁰ communities’. She points out that “like stakeholder communities, enunciatory communities often share certain interests. But they do not necessarily think in the same way about what those interests mean or about how those interests can be protected. Sometimes shared interest

98 Tilly and Tarrow define diffusion as the “spread of a form of contention, an issue, or a way of framing it from one site to another long with brokerage are significant in this instance.”

99 Fortun defines such groups as “people who have a stake in decisions to be made by corporations, government agencies, or other organizational bodies within which decisions by a few people can affect many.”

100 Fortun draws from Lacan and Foucault’s theories of significance and subjectivity. For more see K.Fortun (2001;361-362).

is not even what holds an enunciatory community together” (Fortun, 2001). This calls attention to the non-monolithic and often fragmented nature of the agitating groups often represented in claim-making approaches employed. The CP framework argues that such groups rely on the twin mechanisms of Competition¹⁰¹ and Coordinated Action¹⁰². Competition in this case would refer to how the JSS and SSS operated differing approaches. For instance, the Janakeeya Samara Samithi retained much of its confrontational character with the TMC and GoK using disruptive contention techniques, whereas the SSS—mostly led by members Vilappil Grama Panchayath—resorted to leveraging the political processes in combination with conventional techniques such as sit-ins and marches to engage in contention. These rival factions were however united towards a common goal of the closing down the factory and as such engaged in Coordinated Action to further this objective.

IV. Outcomes: Direct and Indirect

Outcomes refer to events and/or actions that signal a change in status quo, which can be directly connected to the contentious action (Tilly and Tarrow, 2015). In Vilappilsala’s case, the outcomes have been several, some have had direct consequences, while others have been indirect, in their impact. One of the significant direct outcomes from the Vilappilsala conflict, included the stoppage of waste carrying trucks to *Kanikanumpara* and the cessation of operations at the factory. Similarly, in Vilappilsala and nearby villages, another set of outcomes involved an increased activity where several respondents observed that many residents had become much more involved

101 Tilly and Tarrow drawing on Gamson, define competition in terms of the fact that “social movements are seldom unified; they are made up of complementary and sometimes rival organizations with different preferences and different leaders—and often undercut one another. For more see, Gamson 1990 in C. Tilly and S. Tarrow (2015)

102 Tilly and Tarrow (2015) term this process as Coordinated Action, defining it thusly, “two or more actors’ engagement in mutual signaling and parallel making of claims on the same object”.

in other civic issues in the vicinity. Their participation in the conflict has also provided them opportunities to be called upon by similar such contentions. For instance, Shilpa and Bhaskaran have both been approached by the agitators in the *Peringamala/Agasthyamala* protest in 2018 to help with their contention against the GoK. Yet another significant outcome is that the Vilappilsala conflict has led to a change in the way the residents of Vilappilsala see themselves. Along with this the respondents also point out a marked change in the manner other communities identify Vilappilsala. This change in identity and reputation is termed as identity shift¹⁰³ by McAdam, and Tilly (2004). Bhaskaran captures such a shift by pointing out that:

“[Earlier] people would view us with a lot of disdain, that was the identity even for school kids¹⁰⁴, if it is know that they come from Vilappilsala, they refuse to eat their food or drink their water, so this was creating a division even in the children... None of our relatives would visit our houses, even if they come, many of them come to invite us for marriages, when they sit in the bus, what they understand is that Vilappilsala is where the stench is... Then even for marriages, when they know where our house is, that is when they come to see the bride, what they see is that.. for us to an extent we don’t notice it, When you come from outside you would be able to know more readily. So, when we fix everything and they are supposed to see the bride, they ask where it is and even if it is mentioned that is far away from here... in that way many proposals... that is also something that Vilappilsala got after the waste factory had come.”(personal communication,2018).

Later, after the conflict gained widespread attention ,Bhaskaran recounts the change in how they were viewed by others:

103 McAdam et al recognize identity shift as the “formation of new identities within challenging groups whose coordinated action brings them together and reveals their commonalities.” McAdam et al., 2001, in C.Tilly and S.Tarrow(2015)

104 Burhan uses the term *mukham*, literally translating to face, in this context would be sense of shame being developed in terms of invoking their identity as hailing from Vilappilsala.

“...after the protests, wherever we go we can openly say that we are from Vilappilsala, and people have some value when we say that they think about the protests”.(personal communication,2018).

This shift in identity has also been effective in changing the self-perception of residents of Vilappilsala, where the earlier shame associated with their place identity was replaced by pride¹⁰⁵.

Indirectly, the outcomes of the Vilappilsala conflict involved a policy-making shift. The judgement by the NGT directing the closure of the factory not only resulted in its closure by the TMC but also has largely influenced policy in the State of Kerala, vis-à-vis MSW and its management. As a result of this policy shift, TMC adopted a decentralised waste management policy by encouraging source management-based techniques including kitchen bin composting, pipe composting and the establishment of smaller units of bio-methanation in marketplaces and other public places. Similarly, as a result of the conflict, GoK also has embarked on a policy of discontinuing the policy of centralised waste management plants, in turn encouraging alternative means of MSW management.

In sum, the Contentious Politics framework provides tools and scope to examine the multiplicity of tactics, strategies that the various stakeholders involved in the Vilappilsala conflict have used. The Mechanism-Process oriented approach of Contentious Politics places significant emphasis on examining the larger context of the contention, by taking into account not only how the various

105 This is significant in a society where many people introduce themselves by mentioning their native localities and several others have their native places as part of their formal names. Interestingly, I personally have observed two questions that many Malayalis encounter in Kerala and elsewhere, while introducing themselves to other Malayalis:

- a. “Swasthalam evidyanu?” This loosely translates to “where is your native place (within Kerala)? /To which locality do you belong?”
- b. “Naatil evidyanu?” This also loosely translates to, “where in the naadu(Kerala) do you hail from?”

stakeholders in the contention mobilize but also by paying attention to the processes involved in claim-making. However, several scholars have criticized the CP framework for underplaying the role of spatial factors, such as scale in Contentious Politics. In the following section I address such criticisms and argue that spatial considerations in CP framework provides a stronger framework to analyse the Vilappilsala conflict.

5. Spatial tactics in Contentious Politics

“We had only goal, shut down the factory, there should not be any waste coming here. In that we did not bend to anyone’s influence. We just wanted the factory shut...it was people-driven; people took the initiative... people protested initially without counting caste, religion or political affiliation. Including little kids, stopping transport for everything we got a lot of support, that’s how this protest was a success...”

Shanthi, personal communication,2018

The Contentious Politics model proposed by McAdam, Tilly and Tarrow features a process approach to understand the nature of contention. There is an emphasis on the contexts and the historical antecedents of the contention. Deborah Martin and Byron Miller (2003) argue that while CP allows for incorporating perspectives from multiple disciplines on contention and group action, it however, fails to fully engage with the spatial dynamics of contentious politics. In bringing spatial dimensions to Contentious Politics approach, Martin & Miller (2003) argue that the emphasis on Mechanisms and Processes-central to contentious episodes- can provide (1)insight into how groups mobilise(2) how their collective identities form or change, (3)the trajectory of the said contention. Furthermore, they argue that the concepts used for spatial considerations of conflicts and contentious action , such as Space, Place, and Scale present a significant addition to the Mechanism-Process approach proposed by McAdam and others(2004) in that the examination of the contentions in terms of “the spatial dimension of context—e.g., how key actors,

organizations, and institutions relate to and affect other actors, organizations, and institutions across space—plays a crucial role in shaping the operation of mechanisms and processes” (Martin and Miller, 2003).

In Vilappilsala, the protestors have relied heavily on spatially dependent techniques of claim making; especially the technique of ‘Upscaling’ (Purwins, 2022) to traverse scales or “scale-jumping” (Hogenstijn et al., 2008). Sebastian Purwins (2022) demonstrates a similar case of scale traversal in the Atewa Bauxite conflict in Ghana, where various stakeholders approached organizing and mobilizing activities using the twin strategies of demonstration¹⁰⁶ and upscaling¹⁰⁷ (Purwins, 2022) as effective tactics. Similarly, the protestors at Vilappilsala directed their claims at three scales:

- 1) the local: The agitators successfully mobilized themselves to hold protests, in the immediate vicinity of the factory viz. at *Nedumkuzhy*. Similarly, they also held sit-ins and marches to the Vilappil Grama Panchayath office.
- 2) the state: By petitioning the State government to intervene in the matter, the agitators directed attention to their case.
- 3) the national: Simultaneously, the protestors approached the courts for judicial remedy.

106 Purwins defines demonstrations as being “...understood in two different ways. Either to demonstrate something to someone or in the sense of a protest, as a collective gesture of disapproval, like a march”. For more see S. Purwins (2022).

107 Upscaling -according to Hogenstijn and others-refers to a strategy adopted by groups that “...try to refer the conflict to a higher spatial scale, where they have a stronger position on the power balance...”. For more see M. Hogenstijn et al., (2008).

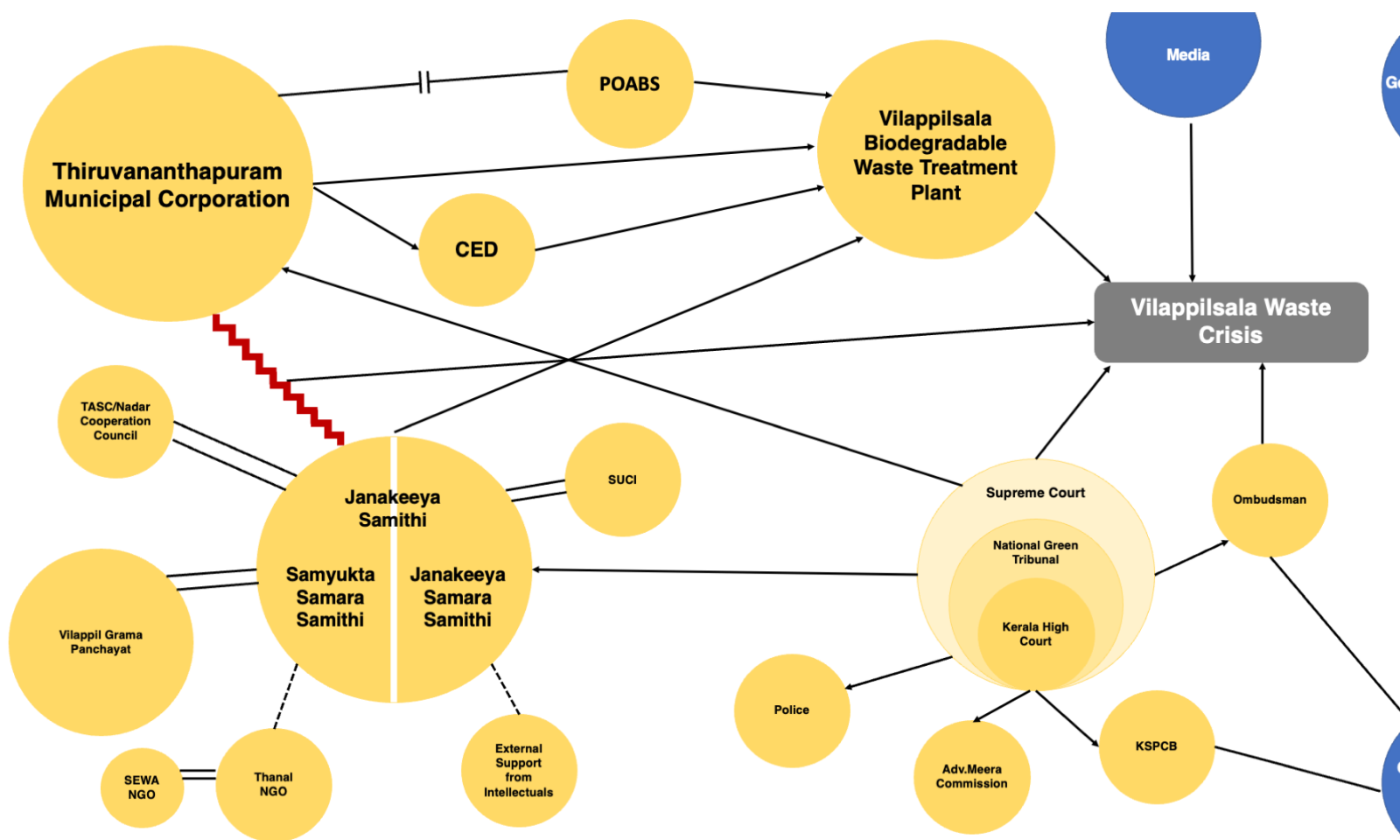


Figure 7.Actor-Conflict Map of the Vilappilsala Conflict.

Source: Author, 2022

Figure 7. represents an Actor-Conflict map¹⁰⁸, a ‘bird’s eye view’ of the Vilappilsala conflict. The Actor-Conflict map also provides a ‘snapshot’ of the scales-represented here as administrative levels- involved in this conflict, showcasing the myriad actors involved in varying capacities and at different scales.

Put another way, the various stakeholders in the Vilappilsala conflict are seen to have moved along and in-between several scales, often concurrently.

In Vilappilsala the adoption of the contentious politics framework provides two significant points:

- 1) Temporal focus: By contextualizing the episodes of Vilappilsala conflict within a broader stream of contention, it becomes necessary to account for its genealogy, viewing the conflict as a continuous process over time.
- 2) Spatial emphasis : the spatial dimension in Vilappilsala gains prominence when attention is directed towards the variety of techniques and material-processes involved. Furthermore, the spatial mobilization of the conflict and the distinctiveness of the tactics employed become apparent. For example, the utilization of CP framework enabled analysis beyond resource limitations or political opportunities, which are often regarded as express of power by diverse interests.

This understanding of the Vilappilsala conflict is further enriched by observations demonstrations and protests at various scales. Demonstrations, protests and litigations organized against the factory, the TMC and GoK demonstrate an effort to transcend scales and effectively convey concerns. Such actions not only redefine the notion of the ‘local’ but also give rise to protests

108 Actor-Conflict Map is a heuristic device primarily used in peace and conflict studies. It has been adopted to studying mobilization in environmental conflicts. For more see, S.Purwins(2022).

spaces across multiple scales, termed as ‘spaces of engagement’ by Kevin Cox (1998). These spaces, often constructed through networks of association, emphasize the performance of actions such as *dharnas* or upscaling. In Vilappilsala, public meetings served as platforms for discussing future actions, devising innovative strategies and identifying opportunities to amplify messages and claims. The involvement of several prominent individuals such as famed sculptor and artist Kanayi Kunhiraman, poet and activist Sugatha Kumari and film-actor Jagathy Sreekumar (Nair, 2015), garnered the agitators’ support of not only the wider populace of Vilappil Grama Panchayath area but also of the nearby villages, to then bind them in solidarity as agitators.

While the ‘local’ in conflicts are potentially reconfigured thusly, the ‘global’ too is challenged and remade similarly. Ananya Roy (2011a, 2011b) contends that such processes of adaptation and adoption results in the urban and rural becoming constructed entities based on the everyday experiences of individuals and communities, in a process termed *Worlding*. The processes of worlding aligns with a call to situate Urban Political Ecology while simultaneously paying close attention to contextual or provincial social and political factors where communities adopt the larger processes of urbanisation, economic and technological modernisation, and globalisation into their life worlds (Lawhon et al., 2014; Bartels et al., 2020). At Vilappilsala, I find that there is a construction of the periurban. The tactics and strategies, in addition to forming fresh repertoires of contention in the immediate context of the conflict, contribute to the construction of their own lifeworlds, which in turn were mediated primarily by the agitators’ identities. For instance, the strategy of upscaling has been used by the agitators to create a common identity to make their claims. Therefore, on the basis of claim-making the agitators’ ‘political identity’ in Vilappilsala stemmed from their shared experiences of pollution and contamination, which was further mediated in their lifeworlds as residents of a ‘polluted land’. The worlding of broader phenomena

such as urbanisation, globalisation, economic modernisation, therefore manifest these political identities having meanings that run deeper than the ones articulated in the process of claim-making. Paul Routledge's (1992) work in Baliapal demonstrates that agitating groups refer to themselves based on identities drawn from their ties to the land a phenomenon, Wester-Herber(2004) terms as 'place-identity'. In the next chapter I discuss this phenomenon at length.

In sum, while the Contentious Politics framework's allows for accounting for context based factors in the process and practices of claim-making, CP's relative neglect in considering the impact and significance of spatial dynamics in the process of contention is indeed a shortcoming. Combining spatially dependent practices along with the temporal framing of the conflict, provides fresh insights into the mobilisation and claim-making processes in Vilappilsala. The inclusion of the spatially dependent practices in the conflict also indicates the ways in which stakeholders constructed and incorporated broader phenomena of urbanisation and globalisation into their everyday practices, with worlding practices contributing to understand how the agitators in Vilappilsala constructed the periurban.

6. Conclusion

This chapter has sought to answer two important research questions vis-à-vis the context of the conflict and its mobilizational and organizational aspects of the conflict. The emphasis on the socio-political context of the Vilappilsala conflict contributes two significant points. Firstly, it uncovers the processes and practices relevant to the conflict, it also allows for accounting of the changing relationship between individuals and organizations. For instance, a contextual emphasis helps to determine the locus of power and map the arrival and departure of stakeholders in the conflict. Secondly, a contextual emphasis highlights the significance of the changing meanings of materials germane to the conflict. For example, the contextual framing of waste in Kerala, its

changing meanings and practices, aided in bringing sharper focus to analysing both the material and non-material aspects of the conflict.

In many ways the conflict in Vilappilsala is a continuation from the initial episode, which had taken place at the time of the establishment of the factory. I was able to trace occurrence of protests as back as early 1990s during the time period when land was acquired and the change in the purpose for which land parcels were acquired began to be publicly known and later during the establishment of the factory , i.e. in 1999-2000 and 2011 up until the closure of the factory. This chapter argues that these events can be fruitfully viewed as episodes of a larger and evidently long-running conflict. Moreover, the initial episodes of the conflict were instrumental in establishing a source of practices and tactics from which further episodes could draw from. While the protests in 2011-2016 have garnered much more attention, especially in the backdrop of the implementation of the Municipal Solid Waste Rules,2000¹⁰⁹ and in terms of a seemingly established finality vis-à-vis the formal closure of the factory, it is however found that all episodes of the conflict have played a significant role in closure of the factory.

The Contentious Politics framework assisted in bringing into a sharper focus in understanding the episodes of conflict. This chapter has argued that Contentious Politics -despite its limitations in terms of spatial dynamics- still provides a significant framework to approach the Vilappilsala conflict. Its emphasis on the agential aspects of communities to organize and mobilise as well as its stress on the contextual elements of the conflict such as the social and political context in which the Vilappilsala conflict unfolded and provided a fruitful avenue to examine the mobilisation aspects of the conflict. Finally the chapter asserts that the strategies and tactics used in the conflict

109 The rules of 2000, came into force in 2000 whereas POABS group had already taken possession of the land in Vilappilsala by December of 1999

as well as the socio-political context of the conflict contributes toward understanding how the periurban is constructed, in terms of collective identity that is situated in their lifeworlds. In the following chapter, I examine the construction of such a place based collective identity in Vilappilsala.

CHAPTER 5

Socio-Cultural Impacts of the Vilappilsala Conflict: Identity, Reputation and Emotional Political Ecology

1. Introduction

In the previous chapter I have analysed the Vilappilsala conflict by addressing two key questions: its contextual factors and its mobilisation and organisation. By examining national-level and Kerala's policies and legislations on Solid Waste, the chapter focused contextualising the conflict in Vilappilsala by unearthing power dynamics and processes vis-à-vis waste and its management. Using a Contentious Politics framework, the chapter viewed the conflict as part of a broader, stream of contention and individual conflict events as episodes within such a stream. The chapter asserted that the strategies used in the conflict contributes not only to reveal power dynamics but also in understanding how the periurban is constructed.

While the description and explanation of the Vilappilsala conflict was the focus of the previous chapter, the broader question regarding the consequences of the siting, operation and closure of the factory remain unaddressed. Consequently, the present chapter addresses the following question:

- 1) How did the Vilappilsala conflict influence the socio-cultural identity of the residents?

In addressing this question, the chapter argues that aside from the physical consequences, the

social, economic and cultural impact of the establishment and (mis)functioning of the factory had a deep effect upon the social lives of the residents, especially in terms of marginalisation and exclusion.

Furthermore, the chapter will examine how the conflict made a lasting impact on the identity and reputation of the residents in Vilappilsala and the larger Vilappil GP region. In the following sections, the chapter examines the change in identity and reputation by connecting the socionature of waste and associated broader policy shifts to its changing perception as a risk. The focus here is on spotlighting the socially constructed nature of risk vis-à-vis waste in Vilappilsala. The chapter also argues that the construction and change in identity in the Vilappilsala conflict-expressed through the claim-making process-drew from emotional connections agitators made to their land viz, a sense of place. In Vilappilsala's case I argue that using an Emotional Political Ecology perspective reveals the connections between political processes and the emotional registers used by the agitators in the conflict. Tapping into scholarship in Emotional Political Ecology, the chapter argues that these emotional connections(often deemed as irrational) are vital to cast light on how individuals and communities not only perceive the risk of waste but also the manners in which they construct their lifeworlds against this background. In the following section, I discuss how a change in perspective regarding waste informed how different stakeholders perceived and constructed the conflict in Vilappilsala.

2. Narratives of Urgency and Crisis: Framing, risk and waste in Vilappilsala

As mentioned in the previous chapter, one of the direct outcomes of the conflict in Vilappilsala was the 2015 NGT judgement to close the factory and the 2016 resolution by the TMC to do so. The closure of the factory in Vilappilsala, threw the existing MSW management system ¹¹⁰of the TMC into confusion and crisis. The TMC was faced with managing the backlog of MSW within the corporation limits along while grappling with the loss of the usage of the factory in Vilappilsala and the (formally) established pathways through which waste in Thiruvananthapuram had been flowing. For example, in a petition before the High court of Kerala, the TMC argued that:

“The Treatment Plant was functioning in its full swing for the last 11 years, and nearly 35 Crores has been invested by the corporation for the establishment of the treatment plant. Now the movement[of] solid waste in the city of Trivandrum to the treatment plant in Vilappilsala has come to a standstill[since] 21-12-2011. The accumulation of waste in the various parts of the city is causing serious threat of the outbreak of epidemics and infectious diseases” (“The Corporation of Thiruvananthapuram Vs. The State of Kerala and Others,” 2012c).

While the TMC was eventually, able to manage the waste crisis in the city, it was forced to reevaluate its existing approach to collection, management and disposal of MSW in the city in the light of the Vilappilsala conflict.

110 It should be noted that from the time the factory began its operations in 2000 and its shut down in 2011-12, the TMC had established an elaborate MSW collection, sorting and transportation system. This system had replaced the erstwhile systems of the Aakrikaaran- the itinerant waste picker, as the de Jure method of collection, sorting and transportation pathways of MSW in Thiruvananthapuram.

On the other hand, the agitators from the villages that had taken part in the conflict, received the shutdown of the factory with hope and happiness. Shanthi, a former Vilappil Panchayat member (personal communication, 2018), expressed relief and remarked that life after the shutdown of the factory, for the residents, was,

“...very happy, people over here live with utmost happiness. Those who sold off and left came back and have built houses and are living here. There are marriage proposals, marriages happen without any issue. There is no stench...”.

It is significant to note that the closure of the factory had different consequences for both TMC as well as the agitators in Vilappilsala. While the TMC feared that the accumulation of waste in their limits would lead to outbreaks of disease, the agitators welcomed the closure, pointing out that normalcy had been restored in their social lives.

The contrasting responses to the factory's closure reflects the differing meanings that the socioculture of waste engendered. It also points to the centrality of waste and its manifold meanings to the conflict in Vilappilsala specifically. Academically, the definitions of waste have varied; for instance, the concept of waste for Sociologists and Anthropologists, can represent “...a mirror of humanity...” (Reno, 2015), whereas for other disciplines such as Industrial Ecology, it can represent ‘matter’ that which remains of the city's metabolic processes (Gandy, 2004; Kennedy & Hoornweg, 2012). While waste can present as an “epistemologically unfixed” (Thompson, 2015) entity for academia, in practice, however, waste is a political, economic, social and cultural entity (O'Brien, 1999) which manifests based on how it is perceived, articulated and valued. In India, the meanings associated with have changed over time; where once it was considered polluting (Sharan, 2014), it has morphed into meanings that emphasized the materiality of waste. For instance, in the background of the opening of India's economy, the triple processes of

liberalization, privatization and globalization emphasized the materiality of waste, “through processes that include[d] market creation, material transformation, and the intense leveraging of economies of scale at both regional and global scales...” waste was then reintroduced into streams of usage and value (Lepawsky & Billah, 2011). Additionally, the triple processes of the Liberalization, Globalization and Privatization also changed the consumption patterns of individuals and communities and in turn waste production. Policy makers were therefore, hard pressed to effectively manage and dispose of the rising quantity of waste as well as the changed nature of the waste being produced. Consequently, the MSW (Management and Handling) Rules of 2000, marked one of the first instances wherein MSW was singled out as a significant policy concern¹¹¹. Furthermore, the rapid growth of the energy intensive service sector in India, drove-in part- a higher demand for energy in urban areas, which traditional sources were stressed to meet. As a response to this the policies and legislations turned focus to approaching waste as a potential resource as well as a source of energy, leading to the rise of Waste to Energy plants in India (Demaria & Schindler, 2016). At an institutional level¹¹², this change in meanings attached to waste manifested in two developments:

- 1) The ‘legitimization’ of waste that resulted in the movement of waste -as a proscribed entity relegated to the margins of society- to occupying a significant place in the agendas of many city administrations. The formalisation of traditional waste management networks and pathways wherein the state (represented by ULBs or PRIs) sought to create a ‘formal’

111 Earlier appearances of waste in legislations had been included in the Water Act, 1974, 1977; Environmental Protection Act, 1989; Hazardous Wastes (Management and Handling) Rules, 1989. For more see, A. Prabhakar (2022)

112 solid waste in particular such as the Five Year Plans produced by the Planning Commission (now the NITI Aayog), JNNURM and regulatory frameworks such as The Municipal Solid Wastes (Management and Handling) Rules, 2000.

networks and pathways of waste flows. This was often done by displacing or replacing existing ‘traditional’ waste management networks and flows (de Bercegol and Gowda,2019).

- 2) The revalorisation of waste -especially in urban India- in part served to abate the apprehensions of purity and pollution, especially among the upper class and mostly upper caste middle classes, where in waste was not only hidden away in an effort to serve aesthetic tastes (Nixon, 2011 ; Ghertner, 2015) but also served to become a ‘commodity frontier’ from which further economic value could be extracted(Demaria & Schindler, 2016).

In other words the twin processes of legitimization and revalorization contributed to a gradual shift in how waste was framed, from that of a pollutant to a resource, reflected in the policies and practices, vis-à-vis waste management in India. It is significant to note that this shift in meanings of waste is also a shift in terms of how waste as a risk was framed. This was reflected in policies wherein a new set of meanings vis-à-vis began to emerge; waste was no longer considered merely a pollutant, a nuisance and a matter that was out of place, but was considered as both a resource as well as a problem that could be managed.

This shift in risk perception was evident in Kerala and Vilappilsala where the risk potential of waste was approached from the vantage point of a problem that needed to be solved, as Dr. Hamid(personal communication, 2021) observes:

“...[Kerala] is facing a major problem in the area of waste management...In fact, technology is available for waste treatment and waste management. They are not very good to solve the problems... And Trivandrum is one of the worst affected urban regions in that way. Trivandrum is now trying address these problems one after another and Vilappilsala was

thought to be solution to this problem... But due to poor technology or under developed technology on one hand and poor management of the facility...”

Another respondent, Dr.Alwin, describes waste management and the conflict at Vilappilsala thusly:

“Waste management does not require rocket technology, but need meticulous application of available technology and its management with discipline and dedication.”

Alwin continued to argue that the conflict in Vilappilsala was

“...technical issue, and it is a problem due to negligence of simple operational guidelines. This could have been overcome by ensuring appropriate facilities for odour control and water treatment and enforcing appropriate operational guidelines.”
(Dr.Alwin,unpublished,n.d.)

These responses demonstrate that respondents such as Hamid, Alwin and the TMC themselves approached waste from a mechanistic vantage point and did frame waste as a problem that needed to be solved but emphasized that the solution was primarily technological in nature.

This was in stark contrast to how the residents of Vilappilsala perceived the risk emanating from waste as well as the (mis)functioning of the factory. For instance, Bhaskaran (personal communication,2018) recollected that:

“People would view us with a lot of disdain ...none of our relatives would visit our houses, even if they come, [many of them come to invite us for marriages,] when they sit in the bus, what they understand is that Vilappilsala is where the stench is...”.

Shamsheer another resident (personal communication,2021)continues:

“Because Vilappilsala by then became a disgusting place for everyone. People hailing from there had many skin diseases and other physical ailments. So, the other people were afraid

that people from Vilappilsala could infect them also. So essentially it was a condemned land”. (Personal communication,2021).

This framing of waste and its risk potential by the residents of Vilappilsala focused on the social and cultural facets of waste, emphasising the humiliation and shame they had experienced, in contrast to the technical and materialistic facet of waste that the TMC emphasised. The framing of waste and its risk potential, therefore, has played a significant role in the Vilappilsala conflict. As established literature in framing vis-à-vis collective action and contention by scholars such as Hajer (1995); Rein & Schön, (1996); Benford and Snow, (2000) ; Davis and Lewicki (2003); Laws & Rein, (2003); van Hulst & Yanow,(2016) show, framing in environmental conflicts has been primarily used various groups to present their cases and staked their claims. In Vilappilsala ,while physical demonstrations and picketing and protests were a significant avenue of resistance and claim-making, the conception, construction and presentation of waste was an equally significant approach. This framing of waste, especially in the documents submitted to the judicial system by the GoK, TMC, the JSS (and associated groupings) reveals competing perspectives and framing of waste as a socionature. Through the construction of narratives that I term as ‘narrative of urgency and crisis’, both the TMC and the agitators in Vilappilsala sought to frame waste and its risk potential as matters of grave concern and urgency, shown primarily through court documents and affidavits filed at various junctures.

For example, in a petition before the High court of Kerala, the TMC argued that:

“If the present situation relating to the removing storing and treating the solid waste accumulated; in the city continues it may lead to the outbreak of epidemics and other contagious deceases in the city. In the interests of the health of the General Public it is only just and proper to afford to the Corporation adequate Police Protection to resume the

functioning of the treatment plant at Vilappilsala at Trivandrum.” (“The Corporation of Thiruvananthapuram Vs. The State of Kerala and Others,” 2012c)

On the other hand, the agitators at Vilappilsala, have also produced similar narratives.

The narratives communicated by the agitators was mostly in terms of the risk emanating from the factory and the waste it held, which they argued negatively affected their lifeworlds¹¹³. For instance, in an affidavit filed by the Samyukta Samara Samithi (SSS) at the National Green Tribunal, the JSS argued that,

“After extending the area of operation of the plant from 12.5 acres to 46 acres, the entire remaining land other than the land in which the plant actually exist was utilized for dumping the wastes collected from all across the city of Trivandrum and this wastes brought to the site was stored for the purpose of utilizing the same for the functioning of the plant .So in effect the entire property of 46.5 acres other than the actual extent of land in which the plant situated was turned to a site of land filling.”

The affidavit continues:

“Due to this dumping of solid wastes , the leachetes has started seeping into the land and started flowing out from the property to the entire adjacent area which include the paddy fields, wells ponds and natural streams... causing extensive environmental pollution...ponds, and wells have changed into dark and has become non-potable. This serious environmental issue has affected the day to day life of the residents of the entire Panchayath. The entire cultivation and cattle farming has come to a standstill and the people of the entire village started having serious health problems including skin diseases,

113 The Oxford Dictionary of Geography defines , lifeworld(sometime spelled as Life-world) as, “The taken-for-granted dynamic of everyday experience that largely happens automatically, without conscious attention or deliberate plan”. For more see, S. Mayhew,(2023).

respiratory problems and other serious illness”(“Vilappilsala Samyukta Samara Samithi Vs.State of Kerala and Others,” 2014).

The agitators focused on the malfunctioning of the factory and their own physical, social and economic hardships. The risk potential of waste in this case was also gauged in terms of the social and economic ostracization, as Bhaskaran (personal communication,2018),recollects the social isolation and damage to their reputation ,the establishment and malfunctioning of the factory had caused, especially in terms of its effects on marriage alliances:

“...so when we fix everything and they are supposed to see the bride, they ask where it is and even if it is mentioned that is far away from here... [the alliance would fall through]”.
(Bhaskaran, personal communication,2018)

Furthermore, the factory’s presence loomed large over the livelihood as well as economic aspects of the residents’ lives. The presence of the factory and the consequent pollution of the water source, affected many of the resident’s’ economic activities that depended on the water source, as the *Malinyathiethire Vilappilsalayude Samaraithihasam*(a book chronicling the Vilappilsala struggle) points out:

“... the paddy farming (nel krishi) and cow rearing activities started to get affected and finally stopped. Since the cow-rearers[cattle-rearers] depended on the water of Meenampalli thodu, they were devastated”(Nair, 2015).

In other words, as an area relying primarily on agriculture, the malfunctioning of the factory and the resultant pollution had led to a drop in the economic production capacity of the village. This is corroborated by another resident Badruddin(personal communication,2021), who recollects,

“we had coconut plantations here, now it’s not there. Then tapioca was also there, comparatively it[tapioca farming] was less affected. Plants and trees with deep penetrating roots like coconut trees, rubber trees etc. were the worst affected ones.”.

Along with this the pollution from the factory also contributed to the devaluation of property in the vicinity of the factory, as Pranitha (personal communication,2019) points out:

“people sold their land for cheap prices because they couldn’t live there. They couldn’t get water, couldn’t live there, nobody would marry into this area, even if they married someone from here, nobody would come and eat meals here, it was at that stage, so people just sold their land and left. They all sold their land for nominal amounts and migrated to the city. They used to survive on the revenue from rearing cattle or small-scale agriculture, but they decided to go to the city and do work like household help etc.”

David (personal communication,2022), further elaborates this point,

“There are people who left their houses and properties within 3-4 kms of the plant because of the stench from the waste. Because these houses were inhabitable, then there are people who sold their houses at very cheap rates and then there are people who still live there because they don’t have any other way.”

Thus it is evident that there were a variety of social and economic consequences, in addition to the physical ones, due to the pollution from the factory. The social and economic hardships encountered by the residents of Vilappilsala contributed significantly to how the residents of Vilappilsala constructed waste and framed the risk from waste in terms of narratives, differentiating it from that of TMC’s. Alexander and O’Hare(2020) argue these narratives reflect the analytical approaches used by different stakeholders. Therefore in the Vilappilsala conflict, these narratives represent either a Douglasian Structural-Functionalist approach, where the symbolic/ritualistic character of waste is emphasised in terms of the sacred/profane binary or a Thompsonian Economic-Materialist approach where waste is identified primarily by its material

nature and is referred to in terms of its economic value or lack thereof. In Vilappilsala, the two analytical approaches to waste and its framing are evident as TMC clearly emphasised the material aspect of the waste, separating it from social connotations, whereas the arguments presented by the agitators in Vilappilsala, represented waste as a socially charged set of practices and mores.

Indeed, as Harish, another resident (personal communication, 2018) angrily wonders

“...it is when this[waste management] is centralised when this stench problem comes up and becomes a major problem... for this[waste management and the factory] there is no need to displace the populace of an entire panchayath... why don't these[TMC and policymakers] people think that the people of Vilappilsala will die out?”.

Put another way, while the TMC, in line with much of the policy and legislations, defined waste by separating its material and social components, the agitators acknowledged both the social and material aspects of waste, viewing the sociomaterial as forming an integral part of their lifeworlds. This also demonstrates that despite (or perhaps due to) the multifaceted nature of waste, its meanings and framings often sit uneasily or come into conflict with each other, underscoring the deeply entrenched nature of the worldviews vis-à-vis waste and its management (Cornea et al., 2017).

In sum, the socially charged nature of waste was brought forth strongly by the arguments made by the agitators. Furthermore, these arguments were expressed as being rooted in an emotional connection to their land. In the following section, I argue that this articulation-framed in terms of place specific identities- not only portrayed a deep social, economic, and cultural connection to their place but also revealed political connotations as well.

3. Stigma, reputation and Collective identity in Vilappilsala

In Vilappilsala, the presence of the factory had had a profound effect on not only the material lives of residents and indeed that of the nearby villages, but had manifested in terms of damage to their reputation and stigmatisation. Stigma as a concept in the social sciences, was popularised by Sociologist Erving Goffman's eponymous work in 1963. While the term Stigma has its origins in ancient Greece, contemporary literature has used the term to generally to mean in a manner similar to Zhuang et al.'s (2016) definition, "Stigma is the negative public perception of living in a community that has experienced a degraded quality of life". For scholars such as Renn et al.(1992), Gregory et al., (1996), Gregory & Satterfield (2002), stigma as a phenomenon "... refers to something that is to be shunned or avoided not just because it is dangerous but because it overturns or destroys a positive condition; what was or should be something good is now marked as blemished or tainted"(Gregory et al., 2001). The phenomenon of stigma has also been studied in various contexts, including that of the environment. Edelstein (2001 as cited in Zhuang et al., 2016) argues that environmental stigma runs parallel to social stigma, "discrediting settings, places, objects, nonhuman lifeforms, and surroundings, as well as people associated with these environments". In other words, stigma in the environmental context runs concomitantly to social stigma. Stigma, in the environmental context has mostly been identified with hazards or contamination such as industrial pollution or with nuclear facility siting. In the instance of Vilappilsala, the phenomenon of stigma is multi-layered, i.e., in a manner similar to Edelstein's argument yet, more nuanced due to its association with MSW.

Indeed, the reputation of Vilappilsala was severely impacted in terms of tangible negative experiences and continued to cast a shadow especially in terms of their abilities to associate with

each other and the community at large (García & Tegelaars, 2019). Sajan (personal communication, 2021), a journalist and a resident of Vilappilsala, recollects,

“When the waste factory was here, though it was situated on Kanikanumpara, the entire 20 wards in Vilappil suffered because of that. Because when someone from here goes outside and says Vilappilsala as their native instantly they would get equated with the waste factory and would be treated with contempt. So, people from here usually say their native place as Peyad or other such nearby places instead of Vilappil”.

Sajan here is referring to the negative reputation that Vilappilsala garnered due to its association with the waste factory. The residents were forced to either hide their connection to Vilappilsala by omitting its mentions or circumventing questions by mentioning a nearby locality as their native place, especially during the fixing of marriage alliances. These manoeuvrings have been made by the residents to distance themselves from the stigma associated with living in proximity to a polluting facility.

Scholarly literature in the North American context has explored the strategies used by communities living in proximity to polluting facilities, such as toxic waste dumps and nuclear plants among others (Lidskog and Elander, 1992 ; Hunter & Leyden, 1995; Litmanen, 1996; Bickerstaff and Simmons, 2009) . Accordingly, this literature suggests that much of the concerns expressed about these hazardous sites have been couched in the lexicon of risk: to environment, to health and in terms of economic losses. However, these concerns can also manifest as shame, loss or grief contributing to how the community in question thinks it is being perceived of as (Wulforth, 2000).

In Vilappilsala, the reputation of the residents and the locality were at the receiving end of both direct and indirect social sanctions. The residents have steadily maintained how the ‘tag’ of Vilappilsala was accompanied by the factory and waste, had a profound and negative effect on their reputation and in turn affected the way in which they identified and presented themselves.

This in turn prompted them to take certain measures, that was primarily aimed at mitigating the shame and stigma attached to Vilappilsala. In this instance as Sajan points out, the ridicule the residents faced when they identified as residents of Vilappilsala, forced them to abandon that identity in favour of that which was more favourable, perhaps that of the nearby villages or even identifying as part of the city of Thiruvananthapuram. The identity (or identities) used by the individual community members and the community, especially in the context of polluting facilities, has been the subject of much scholarship. Scholars such as Edelstein(1988 as cited in Messer et al., 2015); Polletta and Jasper(2001) assert that collective identities provide significant insight into how different stakeholders react to environmental threats(Kroll-Smith, Couch, and Levine 2002;Wulffhorst 2000 as cited in Messer et al., 2015).

In Vilappilsala, the arguments made by the agitators was connected to the loss of their lifeworlds, a combination of their geographic and socio-cultural environments leading to the construction of collective identity that was in one form or another tethered to their land. For instance, as Sudhakaran(personal communication,2019) points out the pollution from the factory had earned Vilappilsala a reputation of

“...a by word for dumping yard, Vilappilsala became synonymous to dumping yard.”,
further underscoring the reputation of Vilappilsala as a ‘condemned land’”.

Therefore, to reverse its reputation as a condemned land, agitators relied on constructing a version their collective identity based on a mythologised past of Vilappilsala:

“The name “Vilappil” indicates that this place had been a settlement from times immemorial. This was a centre of the Brahmins and a school (saala) existed for the study of the vedas. The saala in the place with a good harvest (vilavu) of agricultural produce became Vilavusaala and later came to be known as Vilappilsala...The people of the village used to wake up seeing this hill; hence the name. The rivulet that used to flow even during the hot summer

made the valley of this hill more beautiful. This rivulet later becomes the Meenampally Thodu and flows into the Karamanayar river”. (Nair, 2015)

The strategy to construct a common identity was in part drawn from a relatively vaguely defined past that references socio-religious significance. On the other hand, this strategy also highlights its significance as a place of harvest and plenty along with highlighting its verdant character. This is then juxtaposed to its state while the factory was active to paint a picture that expressed not only their identity as being drawn from the land but also, from agricultural activities and cattle-rearing. As Polletta and Jasper (2001) argue collective identities¹¹⁴ are used to construct a common identity and are utilised extensively by various stakeholders to mobilise, organise and to make claims in situations of conflict. Drawing on “features of the surrounding cultural and environmental landscapes...”, the collective identity of a community denotes how members ‘present’ themselves¹¹⁵. Furthermore, these forms of envisioning contribute towards the creation of a collective identity that is explicitly grounded in the residents’ ties to the land. Eranti(2017) terms such articulations to be based on ‘familiar affinities’, described here as the ties that are specific to meanings attached to material, social and cultural “arrangements with meanings attached to the most intimate surroundings of people”. Put another way, familiar-affinities draw on the individual and communities’ emotional connection to their everyday surroundings. Eranti’s (2017)

114 Polletta and Jasper describe collective identity as “imagined as well as concrete communities, involves an act of perception and construction as well as the discovery of pre-existing bonds, interests, and boundaries. It is fluid and relational, emerging out of interactions with a number of different audiences (bystanders, allies, opponents, news media, state authorities), rather than fixed. It channels words and actions, enabling some claims and deeds but delegitimizing others. It provides categories by which individuals divide up and make sense of the social world”. For more see, F. Polletta and J. Jasper(2001).

115 In a process similar to Goffman’s ‘Impression Management’, the community members notion of how they perceive themselves as well as how others perceive, leads them to constant adjust their identity, and present their ‘ best’ identities or ‘master status’. For more see, E. Goffman(1959).

conception draws on Agnew's conception of place,¹¹⁶ by arguing that place, beyond geographic registers, presents as familiar affinities that are informed by a 'sense of place' which individuals and communities develop with their land involving strong emotional and personal affinities and entanglements (Eranti, 2017; Agnew 1987 as cited in Martin & Miller, 2003; Semken, 2005; Bonnes and Secchiaorli, 1995 as cited in Wester-Herber, 2004). In Vilappilsala, the agitators expressed their emotional connection to the land in terms of loss, pride and grief as Bhaskaran (personal communication, 2018) observes:

“See it is a matter of pride right, that they identify themselves with their places, if one can't do that then it is that bad is what comes out right? That was what the state of Vilappilsala was after the waste factory had come.”

Thus, responses such as that of Bhaskaran's attribute the loss of identity due to the presence of the factory and furthermore, mourn the loss of the identity that they once had (presumably before the establishment of the factory). This loss of identity is then shown as the basis on which the emotional connection to their land is severed, resulting in a loss of reputation and pride.

In summary, the reputation of the residents in Vilappilsala was negatively affected by the pollution from the factory. The loss of reputation and resultant stigmatisation manifested not only in terms of their livelihoods but also in terms of their sociality and sociability. Such consequences in turn

116 Agnew's conception of place, involves three intertwined elements:

Locale, b) Location c) Sense of place

Agnew distinguishes between the different facets of place that together make up the entity of place Viz, for Agnew Locale would mean a "...set of informal and institutional relations within which a place is located." Whereas the Location then would refer to the physical, geographical setting of place. Finally, a Sense of place refers to amalgamation of the meanings and interpretations that individuals or communities hold with respect to the place. For more see; J. Agnew (1987); Guthey et al., (2014)

influenced how the residents viewed themselves, adopting strategies to hide or alter their identity as residents of Vilappilsala. Accordingly, residents expressed their identity through emotional connections that drew from a sense of place. In the following section, I discuss how these emotional connections represent a political stance by the agitators in Vilappilsala. I argue that approaching these emotional and place-identity based strategies, from the vantage point of Emotional Political Ecology, would reveal the political nature of emotions as well as the underlying structures of power and access in conflicts such as Vilappilsala.

4. Power, emotions and socio-ecological risk in Vilappilsala

In the context of environmental conflicts, NIMBYism has been used, erroneously, as a catchall term to explain “local opposition to new land-use projects due to their proximity to the local community” (Sebastien, 2017), earning such projects the moniker of Locally Unwanted Land Uses (LULUs). Some of the earliest research on LULUs and NIMBYs arose out of the American South and were drawn from movements against toxic siting facilities. These facilities, characterised as “environmental infrastructure” included waste management facilities, power plants, highways and airports, opposition to these infrastructural projects were often characterised and framed using the terms LULUs and NIMBYs (Blowers and LeRoy, 1994). The initial usage of the terms LULU and NIMBY have portrayed these phenomena as either irrational and/or ‘selfish’, (essentially imputing a pejorative connotation to the term) and consequently leading to their dismissal from popular imagination and policy circles. Contemporary literature has, however shifted from imputing selfish and irrational motives to such LULUs(Dear 1992; Mazmanian and Morell 1994; Inhaber 1998, as cited in Hager, 2017), to engaging with NIMBY and LULU from socio-political vantage points (Freudenberg and Pastor 1992 as cited in Litmanen, 1996; Hager 2017).

In other words, there has been a palpable shift away from considering NIMBY in its pejorative

connotation to approaching the responses to LULUs as realistic responses to tangible issues. Such issues could range from policy design and implementation to pollution and public health concerns, to economic and social concerns (Rabe, 1994 as cited in Hager, 2017); many of which have been expressed in the Vilappilsala conflict. However, this shift does not take into account the role that social, political and emotional connections that communities make to risk emanating from the LULU. For instance, Holm et al.,’s (2021) study shows that the framing of risk vis-à-vis waste by communities as well as ‘experts’ played a significant role in the struggle against solid and liquid waste treatment plants in Mzuzu city, Malawi. This difference in ‘real’ and ‘perceived’ risk, Slovic, (2001) contends, is very much a result of the socially and politically mediated nature of risk¹¹⁷ as a value laden and subjective phenomenon.

In Vilappilsala, for instance, TMC attempted to characterise the failure of the factory and the resultant conflict simply as irrational and parochial public opposition, as a report filed in the High Court of Kerala by the Environmental Engineer of the Kerala State Pollution Control Board (KSPCB) characterised the failure of the factory thusly:

“The technical process adopted for waste treatment is windrow composting, which is in accordance with that suggested in the MSW Rule, 2000. However, there have been operational constraints in the plant due to expansion and renovation of the plant during the last one year. This has impacted the process adversely leading to emanation of foul smell and nuisance to a certain extent to the local public, which is understood to be one of the two reasons for the present crisis. Having completed the expansion, the problem of foul smell could be overcome by strictly adhering to the windrow composting protocol and specially ensuring improved aeration, regular application of inoculums and modulating the windrow

117 Paul Slovic contends that risk is socially mediated as opposed to the views dominant in the field of Risk Management. Slovic further argues that the perception of risk by the general populace can differ markedly from the definition of ‘real’ risk as defined by ‘experts’ or professionals. For more see, P. Slovic (2001).

size. The other reason for the present crisis is the leachate flow...” (“The Corporation of Thiruvananthapuram Vs. The State of Kerala and Others,” 2012c)

This line of argument was also echoed by the former Mayor of the TMC, Adv. Janaki, who argued that:

“The leachate was an issue, but we [TMC] were prepared to tackle it by introducing a leachate treatment plant. But they opposed it and the equipment is lying unused in the Corporation yard. At the time the plant was constructed the technology was not so developed, had they allowed the leachate treatment plant, it would have become India’s first such plant, but...(personal communication, 2022).

On the other hand, the agitators argued that the pollution from the factory affected them not only in terms of economic loss and stigma but in terms of *suffering* and highlight their emotional impact as a place destined (or forced in this case) to carry Thiruvananthapuram’s waste. This is evidenced in an affidavit filed by the JSS before the High Court of Kerala that framed the malfunctioning of and the resultant pollution from the factory thusly:

“it is the people of Vilappil Panchayat and nearby panchayats that have to bear the brunt of the complete failure of Vilappil Solid Waste Treatment Plant. People are suffering from health issues, environmental issues, economic-social issues, employment issues etc.” It is quite disappointing that the associated officials are not ready to redressal actions even when the people of Vilappilsala panchayat, a place destined to carry the whole waste created in Thiruvananthapuram city, are suffering” (“Karmachandran and Others Vs. The State of Kerala and Others,” 2012).

Slovic (2001) argues that the subjective perceptions of risk is informed by emotional and affective factors, such as, fear, joy, shame, relief and guilt. Urban Political Ecological literature extends this argument, through studies such as Ranganathan (2015), Saguin (2017) that socio-ecological risk, its perception, construction and communication play an important role in understanding conflicts

such as that of Vilappilsala's, especially when read against a hybrid socionatural entity such as that of water or waste. The socionature of waste is deeply embedded in networks of power that in turn mediate the construction of risk. Historically, framings of waste in India, have hinged on cultural meanings and associations. Waste has historically been connected to the Dalits and the lower castes- as both material and cultural artefacts- who were culturally and spatially segregated due to their association with 'polluting' or 'unclean' professions. For instance, the *Kattunayakar* community who are present across Kerala, Tamil Nadu and parts of Andhra Pradesh-were often referred to as *Thoti* caste, whose primary occupation was manual scavenging and waste collection-were forced to live outside the village premises and permitted into the village only in certain times of the day, provides insight into how risk from the material of waste was perceived. Moreover, this perception of risk dictated the approach to the groups associated with handling and managing waste. In other words, the power to define risk determines its solution (Slovic, 2001). Thus the diverging framings of the risk potential vis-à-vis waste in Vilappilsala is brought forth strongly in their respective narratives of urgency and crisis, spotlighted earlier in the chapter:

- 1) The TMC's arguments for justifying its continued occupation and usage of the land in Vilappilsala is couched in terms of economic gain and loss, in terms of revalorising waste (as was the original logic behind the establishment of the factory) and in terms of revenue loss that the TMC would incur if it were to abandon the factory. While at the same time TMC emphasised the dangers of untreated waste that was now piling up within the corporations limits.
- 2) The agitators had represented their narratives in terms of physical and social harms. For the agitators and residents of Vilappilsala, waste represented a negative externality that was imposed on them, by the TMC, the GoK and GoI.

While TMC's approach to waste was mostly mechanistic, it also reveals a contradiction: on one hand it is a material out of which further economic value can be extracted (in terms of biofertilizers) whereas on the other hand the TMC is clearly apprehensive of the risk that untreated waste can present vis-à-vis public health and wellbeing, within its jurisdictional boundaries. Furthermore to promote its profit motive, the TMC viewed waste as a resource it was entitled to draw value from, demonstrating that the risk assessment regarding the waste and the factory was not objective, rather, the definition of this risk hinged on a profit motive. This was reflected in the characterisation of waste and the conflict in Vilappilsala that Former Mayor Sivankutty¹¹⁸ articulated, as recounted by Sudhakaran(personal communication,2019):

“For Sivankutty personally, I don't think it is about money[the establishment of the factory]. It was for him the name of having solved the Thiruvananthapuram waste problem. So, this is the classic case of a leader or a corporation head, who was arrogant enough to think that whatever is the way forward, I will do it, and who did not even once turn back and listen to people who were talking about why this will fail.”

Here Sudhakaran characterises the former Mayor, Sivankutty as assessing the risk posed by the waste treatment plant through the lens of probability as well as 'objectivity' and concluding that the factory's presence was a 'necessary and acceptable risk'. This assessment of waste as a risk necessarily excludes others' perspectives(such as that of the agitators). Since Sivankutty was the Mayor of Thiruvananthapuram, such framings were reflective in the steps that he had(or had not) taken. TMC's insistence for access to the factory reflects its ability to frame definitions of waste and is demonstrative of the role that power plays in the construction of risk.

The agitators, on the other hand framed their arguments in a relational manner, wondering why

¹¹⁸ a former mayor of Thiruvananthapuram,

waste-a material they do not view as particularly ‘troublesome’- was posing such an issue for Thiruvananthapuram as to warrant its dumping in Vilappil or any other area for that matter (Harish,personal communication, 2018).

Sudharakan continues:

“That is why I say, unless any developer, any person in the govt system any other bureaucrat, unless they don’t really have a sense of this, how does it affect, I mean I have solved my waste or water or transport or technical problem, but at the end of the day I have messed up somebody’s life, if you don’t have a sense of it, then you don’t have a place anymore, at least in Kerala you shouldn’t have a place. Because Kerala is not just about lots of people living in small areas, it is also very ecologically and climatically fragile, we really don’t know what the next day is like, so we have to have a very imaginative, ecologically, geologically”.

Sudhakaran here places emphasis on the relational and interdependent nature of waste, indicating that waste is not merely a technical problem to be solved but a social and cultural artefact that affects the lifeworlds of the residents. This relational conception of waste is also evident in the emotional articulations that the agitators made in the course of the conflict. Farhana Sultana(2011, 2015),drawing from Emotional Geography and Feminist Political Ecology ,argues for examining these emotional connections in perceiving risk, by privileging an Emotional Political Ecology. Sultana’s conception of Emotional Political Ecology highlights the significance of “heeding the complex emotions and meanings attached to resources access, use and conflict in order to better understand the emotionality thereby engaged in everyday struggles” (Sultana, 2015). In other words, an Emotional Political Ecology takes into account the roles played by complex emotions and affectations in conflicts such as that of Vilappilsala’s. More significantly, Emotional Political Ecology rejects the notion of emotions in environmental struggles as irrational. Instead EmPE(Emotional Political Ecology)(González-Hidalgo & Zografos, 2020) argues that emotions

matter in as far as they reveal the complex and sophisticated worldviews that communities draw from especially in terms of resources. An EmPE also extends PE and UPE's arguments of the political nature of human-nature relationships by pointing out the significance of emotions to unearth networks of power.

For instance, the Police action enacted by the GoK in the first episode of the Vilappilsala conflict has been cited by respondents as a major reason for the failure of the protests in 1991. The strong repressive actions taken by the Police not only produced a chilling effect in the minds of the agitators but also served to significantly slow the overall momentum of the protests. Similarly, the *lathi* charge action by the Police as well as prohibitory orders issued by the District administration, on 3rd August 2012, the day of the *Pongala*, was also aimed at striking fear into the agitators ,in an effort by the GoK to counter the protests.

Emotional articulations also reveal how and why communities construct and assert their collective identity in the context of environmental conflicts. For example, Shamsheer(personal communication,2021) emphasises the galvanising effect that collective humiliation can have by stating that:

“...the living conditions of the people degraded and they even lost their sense of dignity. Humans would tolerate anything but they won't tolerate humiliation. The people of Vilappilshala were humiliated ... On one side they had to face abuse from the officials and on the other side people from other regions also humiliated them because of the condemned state of their native place.”

Thus one can argue that the stigmatisation, loss, shame and humiliation have played a central role in the organisation of the protests as Nair (2015) points out that

“this[the agitation] is not a resistance against the Govt. or the corporation, instead it is a resistance against the denial of people’s right to life with dignity”.

On the other hand, the invoking of a mythologised Vilappilsala -along with referring to themselves as victims of pollution-served as useful strategy for the agitators to build a common, place-based identity to mobilise and organise, in a practice that (Devine-Wright (2009) and Anguelovski and Martínez-Alier(2014) term ‘place-protective’. Ranging from relatively non-confrontational activities such as placing representations and filing affidavits in several courts, petitioning the state executive machinery to active conflict situations such as picketing, sloganeering, marching as overt acts of protests ,‘place protective’ behaviours signal the agitators’ willingness to fight for their place and identity and assert their power over the situation. For instance, it can be argued that in the Chipko Movement, the emotional act of hugging trees as a form of protest can be taken as an assertion of place-identity as well as a need to safeguard such an identity (Agrawal, 2005; Dwivedi, 2001, 2006).In Vilappilsala’s case the agitators undertook marches from Vilappilsala to Thiruvananthapuram(covering almost 40KMs) to not only underscore their positions but also to appeal to the emotions of the city’s denizens, thereby engaging in place-protective practices. Accordingly the construction of a common place-identity was a significant strategy to not only articulate and make claims but also to construct their own lifeworlds.

However, this is in no way to say that place-identities are in fact monolithic, rather as Pierce et al., (2011) argue place-identities and the construction of place are mostly comprised of bundles of individual and collective frames (termed as place-frames), which themselves are acts of assertion of power. In Vilappilsala, the articulation of an ideal typical place-identity, mostly drawn from competing place-frames, is seen to be derived from three time periods or situations: (1) Functioning of the factory (or lack thereof) (2) during the conflict episode of 2011 (3) after the

factory was shut down. In each of these phases, the ideal-typical place-identity was expressed often in conjunction with arguments based on affective attachments to the place. The first and second identities were based on loss, shame and alienation, with the agitators grounding their claim making processes and contentious repertoires in a place-identity of loss, while the third ideal typical-identity was based on the outcome of success. Over the course of Vilappilsala's struggle against the factory, the reputation of Vilappilsala changed from that of a village where a waste-management facility was located to one where a clutch of villages had successfully pushed back against a city, in this case a state capital. As mentioned in Chapter 4, this change in ideal-typical identity is termed as "Identity shift" by McAdam et.al., (2004), defining it as the alteration of collective identity during the course of the contentious claim making. To be clear, while the residents still resented their status as Thiruvananthapuram's waste dumping yard, I find that the agitators were keen on using a newer collective identity, one that was coupled strongly with their struggle against the factory. The agitators used 'identity shift' to contrast between an idyllic version of Vilappilsala and a version during and after the factory's malfunction to construct a particular narrative(as mentioned earlier), showcasing a discursive form of power wielded by them(González-Hidalgo & Zografos, 2020). In other words, Emotional Political Ecology not only reveals structural power as asserted by the TMC and GoK but also discursive power in terms of how the agitators used place-identity to make their claims. I argue that EmPE allowed to understand that the construction of such a place-based collective identity were assertions of power, which were, firstly, ideal typical in nature, secondly, tapped into emotional registers and thirdly had changed over time.

In summary, the role of emotions are important in how different stakeholders frame and construct risk. The role of networks and structures of power is also emphasised in such a conception, directly

influencing how socio-ecological risk is constructed and communicated. This was evident in how the GoK handled the protests in 1991 as it is evident in strategies based on emotional registers used by the agitators to make their claims. I argue that utilizing an Emotional Political Ecological approach serves to reveal the networks of power in Vilappilsala. The construction of a collective identity based on emotional articulation to the land was an assertion of discursive power by the agitators to mobilise and organise protests.

5. Conclusion

At the outset, the chapter endeavoured to answer the third central question of the thesis in terms of the consequences of the factory and its malfunctioning, especially how the factory and the resultant conflict had impacted the residents' socio-cultural identity. The chapter argues that the framing of waste as a risk is at the centre of the Vilappilsala conflict. Furthermore, the risk attributed to waste is perceived differently by different stakeholders, leading to competing visions of waste. In other words, through 'narratives of urgency and crisis', I show how both the TMC as well as the agitators at Vilappilsala articulated their positions vis-à-vis waste. While TMC emphasised the material aspect of waste as a resource, separating it from social connotations. The agitators argued that the waste and the pollution from the factory had negatively affected their reputation, resulting in stigma to their sociality and sociabilities. Resultantly, such consequences influenced how the residents adopted strategies to hide or alter their identity linked to Vilappilsala. On the other hand, the socially charged nature of waste was also used in the arguments made by the agitators who anchored such arguments in emotional connections to their land, articulated in terms of a place specific collective identity. By approaching the Vilappilsala conflict using Emotional Political Ecology, I demonstrated the political nature of emotions along with revealing networks of power and access in Vilappilsala. Finally, I argue that adopting a relational approach

to waste and its risk potential -by drawing attention to its social and cultural facets as well as its materiality- such emotional connections represent a political stance by the agitators in Vilappilsala.

CHAPTER 6

Conclusion

1. Insights from Vilappilsala

The fires at Brahmapuram, Kochi, raged on for over 10 days. As the smoke settled and the fires were put out, attention once again turned to a fundamental issue that continues to plague policy makers and city administrators in Kerala: that of management of MSW. Central to crises such as Brahmapuram have been policies that viewed MSW as a problem to be managed, emphasising a mechanistic approach. The Brahmapuram crisis represents the latest among many instances that underscores the need to re-examine present approaches to MSW in Kerala and in India.

The present thesis has examined one such instance, namely, the conflict in Vilappilsala, to gain an insight into how waste, its social and political connotations and the processes of urbanization and globalisation have been entwined. Hypothesizing that the conflict in Vilappilsala -contrary to general perception- represented more than an instance of NIMBY or an instance of a failed strategy vis-à-vis management of MSW¹¹⁹, the thesis finds that current approaches to waste and its management are not only unidimensional but do not take into account the lived experiences of communities. The thesis also shows that conflicts such as Vilappilsala are manifestations of power struggles and inequity in terms of the ability to influence outcomes through conventional decision-making processes.

Finally, drawn from field narratives, the evidence marshalled in the thesis shows that the conflict

¹¹⁹ Drawn from policy and schemes of the Union Government such as JNNURM (precursor to the AMRUT scheme).

in Vilappilsala shows that the urban (Thiruvananthapuram) and the periurban (Vilappilsala), share a nuanced and dynamic relationship influenced by differing visions, conceptions, and experiences of urbanization.

Accordingly, the salient findings of the thesis are presented as below:

I. A relational approach to the periurban

The dynamic relationship shared by the urban and the periurban are dependent on varying visions and experiences of urbanisation, often manifesting as conflict and contestation, in contravention to the traditionally held understandings of complementarity. To address such contestations and conflicts, the thesis has adopted a relational approach to understanding the urban and the periurban. Such a relational approach to urban and periurban places contests the territorially bounded notions of urban and non-urban, instead, it focuses on the processes, linkages and flows that bind such places. Moreover, underscoring the processual nature of urbanization challenges the traditionally held conceptions of the urban and the non-urban as separate entities, assumed to operate in silos. Therefore, the argument is made that any approach to understanding periurban and urban must begin by considering such places in relation to each other. To reveal this processual emphasis, a novel combination of methods was used, which incorporated Situated Urban Political Ecology (Lawhon et al., 2014 and Bartels et al., 2020) with the Extended Case Method (Burawoy, 1998) (elaborated in Chapters 2 and 3). This combination allowed the thesis to provincialize the conflict by privileging everyday narratives and practices vis-à-vis MSW, across administrative and geographical scales in Kerala and India. Furthermore, the recasting of the urban and the periurban in a relational approach extends the case, to connect ‘global’ phenomena such as urbanization with ‘local’ conflicts such as that of Vilappilsala’s, beyond administratively demarcated territorial understandings. In other words, the processual emphasis of the combination

of ECM and SUPE, takes into account the relational linkages between urban and the periurban, analysed through the lens of Power, Conflict, Environmental Justice/Injustice and Scale and therefore frames the urban and the periurban as a region.

II. Differing constructions of waste

One of the most significant learnings from the Vilappilsala conflict has been the criticality of waste. The thesis finds that the conflict in Vilappilsala is undergirded by different constructions of waste as both material artefacts as well as social practices. The insights gained by examining the worldviews on waste-beyond those of the agitators and officials of TMC-are in contrast to a narrow understanding provided by framing the conflict in terms of health and wellbeing. Furthermore, the significance of the socio-political context of Kerala reveals the multiple meanings attached to the socionature of waste, which in turn influenced policy actions regarding the same.

For example; the TMC approached waste collected within the city limits as an asset from which further value could be extracted and a collective good over which TMC (representing the state in this instance) had exclusive jurisdiction. Therefore, the establishment of the factory in Vilappilsala was part of an effort by the TMC towards actualising this goal.

This worldview and meaning associated with waste-which emphasised its materiality over social and cultural facets- also closely aligned across administrative scales and decision-making apparatuses, having a near consensus vis-à-vis waste management.

This was in contrast to the worldviews expressed by residents in Vilappilsala and nearby villages, which portrayed a different relationship with waste that was far more spatially contingent than the TMC's a-contextual approach. In their worldview, waste as yet another material they encountered that formed an important part of their lifeworlds which had transformed-through the factory and its mismanagement-from an innocuous fact of everyday life to that of a social, political and

economic risk.

III. Emotions and Contentious Politics

This diversity in terms of meanings of waste is a potential basis for conflict¹²⁰ if not contentious politics that holds relevance for mobilisation and organisation as well as in claim-making (Chapter 4). To sharpen our understanding of conflict in UPE, the nuance of power is observed in everyday practices, yet it is stressed that such practices are not divorced from institutional and structural pressures that play out in such conflicts. An argument is made that focus of such analyses must not be limited to either structural or agential analyses. Rather, as the thesis shows, both structural and agential aspects of power have played out in Vilappilsala revealing an emotional aspect to the conflict. This is evidenced by claims made emphasising attachments to place, wherein the emotional aspects of social and political processes are engaged to argue for recasting both the relationship between the urban and the periurban as well as the material and social aspects of waste. The implications of these findings are three-fold, firstly, the ‘one-size-fits-all’ approach adopted by national and state-level policies vis-à-vis waste are shown to be a-contextual. Instead, a provincialized or situated approach draws attention to the significance of social and cultural facets of waste, by taking into account socio-political contexts of cases. The place-based arguments made by the agitators in Vilappilsala underscored the politically and socially charged nature of waste (Chapter 5).

Secondly, the contextualisation of the approaches to the socionature of waste necessarily undermines the waste regimes (Gille, 2010) that espouse a mechanistic worldview of waste. The

¹²⁰ Conflict in terms of this thesis includes disagreements, protests, lawsuits, petitions and violent action

contextualisation of socionatures (in this case waste) also serves to contest the prevalent conception of urban and periurban as discrete units, instead arguing for a continuum based approach that considers urban and periurban as relationally dependent and regionally constructed. Finally, a relational approach to periurban places calls attention to the futility of definitional exercises vis-à-vis urban, periurban and rural that are traditionally based on both administratively demarcated boundaries and a-territorial and conceptual perspectives. Instead, the thesis presents the argument that a relational approach incorporates both territorial and a-territorial definitions of urban and periurban. Such a relational approach also calls for a relook at the regional emphasis of Political Ecology posed by scholars such as Blaikie and Brookfield(1987), suggesting the emergence of a different regional Political Ecology. Drawn from the theoretical advancements made in the field of Political Ecology (and associated fields), the thesis argues that an updated conception of regional Political Ecology must privilege, above all, relational and contextual approaches to socionatures such as waste.

2. Limitations and Further Research

Limitations with respect to the methodological and theoretical scope of the study are as follows:

- 1) The present thesis has investigated the Vilappilsala conflict in Kerala using a theoretical and methodological matrix combining Situated Urban Political Ecology and Extended Case Study method. Such a matrix was developed in the context of the Vilappilsala conflict and considering Kerala's socio-spatial contexts of rurubanity. However as indicated in Chapter 3 such a matrix as adopted here may not be readily suitable to other cases, despite apparent similarities. In other words, considering the socially and culturally diverse nature

of India, attempting generalisation in terms of theorisation is fraught with complexity. Consequently, future studies would benefit from engaging in contextualising the approach used in this thesis, suitably.

- 2) Furthermore, in terms of methods, the conflict described in the present thesis has been studied *post-facto* viz., the collection of data therefore had to adapt to the challenges of the lack of synchronicity. That is to say that the collection of data was asynchronous in character owing primarily to the fact that the factory was shut down in 2012 and formally shuttered in 2016 whereas the present study only began in 2017 with data collection schedules beginning in 2018. Therefore a significant portion of the study was dedicated toward the reconstruction of the episodes in the Vilappilsala conflict, via the following methodological innovations:

- a. Broadening of Temporal Frame: An asynchronous approach encouraged a consideration of the conflict in a broader temporal frame. Moreover, the consideration of a broader temporal frame allowed the study to consider historical, social and political contexts to the Vilappilsala conflict, effectively extending the case to include the border social, political and historical context of Vilappilsala, Thiruvananthapuram, Kerala and India.
- b. Episodical emphasis: The broadening of temporal frame also enabled in challenging fundamental assumptions regarding the Vilappilsala conflict and the importance of considering the conflict in 2011-12 as part of a longer chain of conflict episodes(streams of contention).

- 3) The thesis has focused on utilizing Municipal Solid Waste as an entry point for the study; the collection, handling and management of which is dependent on regularised households

within the Urban Local Body, in this case TMC. Therefore, data regarding MSW generated by non-regularised households or slums have not been included in the study due to paucity of relevant data. Moreover, the possibility of utilising other sociomaterials such as water, wastewater, smoke etc. as entry points remain valid and can possibly provide different insights.

In sum, the Vilappilsala conflict-while not the first instance directly related to waste and its management in Kerala- has had a deep impact in terms of waste management as practice and as policy in Thiruvananthapuram and in Kerala, broadly. The thesis has examined the conflict at Vilappilsala using a combination of Situated Urban Political Ecology and Extended Case study Method. In doing so the thesis has shown that socially and politically constructed nature of waste and urbanisation underscored the situated and entrenched networks of power. Accordingly, the thesis has argued that that a relational approach to waste as well as the periurban serves to advance theorisation in Political Ecology and Urban Political Ecology by focusing on the processes that connect the periurban and the urban.

Finally, the case of the Vilappilsala conflict-joining an emerging and significant stream of scholarship in India and much of the Global South-demonstrates that although solid waste is of increasing concern to policy makers and city administrators alike, the relational characteristic of waste underscores a need to recast the flows and processes that bind the periurban as well as the urban which future policies can ill afford to ignore.

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APPENDIX A: Details of Interviewed Respondents

Respondent	Location	Gender	Date of interview
Narayanan	Thiruvananthapuram	Male	17.01.2018
Vivekan	Vilappilsala	Male	19.01.2018
Shanthi	Vilappilsala	Female	30.01.2018
Bhaskaran	Vilappilsala	Male	01.02.2018
Harish	Vilappilsala	Male	01.02.2018
Unii	Vilappilsala	Male	23.11.2018
Aniyankunju	Vilappilsala	Male	23.11.2018
Hamid	Thiruvananthapuram	Male	14.08.2019
Ajayan	Thiruvananthapuram	Male	19.08.2019
Binu	Thiruvananthapuram	Male	26.08.2019
Kareena	Others(New Delhi)	Female	12.09.2019
Sharada	Others(New Delhi)	Female	14.09.2019
Satish	Others(Kollam)	Male	16.10.2019
Rajendran	Vilappilsala	Male	21.10.2019
Sasi	Vilappilsala	Male	24.10.2019
Vinayan	Vilappilsala	Male	24.10.2019
Sudhakaran	Thiruvananthapuram	Male	26.10.2019
Pranitha	Thiruvananthapuram	Female	30.10.2019
Shilpa	Vilappilsala	Female	10.11.2021
Raju	Thiruvananthapuram	Male	12.11.2021
Shamsheer	Thiruvananthapuram	Male	16.11.2021
Vinod	Vilappilsala	Male	20.11.2021
Santosh	Others(Video Conference)	Male	01.12.2021
Sajan	Vilappilsala	Male	05.12.2021
Alwin	Thiruvananthapuram	Male	06.12.2021
Babu	Vilappilsala	Male	11.12.2021
Badrudhin	Vilappilsala	Male	14.12.2021
Janaki	Thiruvananthapuram	Female	06.01.2022
David	Vilappilsala	Male	10.01.2022
Benoy	Thiruvananthapuram	Male	21.12.2021

APPENDIX B: Interview guide

Broad Questions	Follow up Questions
History	• siting issues • history of the protests • waste management in Vilappilsala/ Trivandrum before the factory
The strategies used by the protesters.	• how were the protests organised? • allies and support
what were the main arguments of the protestors?	• Residents of Nedumkuzhy? • Residents of Vilappilsala village? • Residents of nearby villages?
what were the counter arguments?	• By the TMC? • The Kerala government? • Citizens?
How did the Vilappilsala protests, and the subsequent waste blockage affect your life then?	what facets of life, economic, social, cultural etc were affected?

now?	
As someone living in Trivandrum how did Vilappilsala conflict affect your life?	• what changes did it bring in your day-to-day life • what has its impact been on a larger scale for you?
Future	On the 10 anniversary of the Vilappilsala protests how do you see Vilappilsala's role in the future of such movements?

APPENDIX C: Codebook

1. 1st cycle of codes

I. Codes\\Initial codes

	Name	Description	Files	References
	'Arrogant TMC'	Instances where the TMC is characterized as Callous and Cavalier	7	19
	Alternate institutional mechanisms	Creation of alternate institutions in response to perceived failure of existing ones	4	8
	Corporation's reaction		8	16
	Rejoinders	Corporation's rejoinders	12	31
	Narratives of Urgency-Crisis	The corporation's narratives of what would happen if the plant ceased to be. Risk portrayal?	11	17
	Counter Tactics		4	12
	Design	Design lapses in the siting and in workings	4	13
	Unintended consequences	Unintended consequences of the design and of "solutions" for issues with the design	1	1
	Effects of Waste Plant in Lives of V	Both Physiological, Psychological as well as Socio-Cultural	2	2
	Adapting to the plant		2	3
	Economic ties	Work and livelihood connections	13	29
	Physiological and Psychological	the primary reasons for protests, including the issues that the protestors faced while the plant was working	25	83
	Socio-Cultural Effects of the plant	The changes that took place after the plant was established.	10	22
	Sociability	Affecting the maker in which social interactions occurred.	3	5
	Stigmatization	Stigma caused due to location of plant	6	12
	ascription of stigma to the place	How others describe Vilappilsala in day-to-day conversations	2	2
	Identity formation	significance of V to its residences	4	7
	Engagement with wider audiences	The increasing attention that	7	15

		the case started bringing and the engagement of others		
	False pretenses(discourses)	The pretenses under which the land was taken up by the GOK/TMC	5	7
	Promises of development	Discourses of development	5	7
	Financial arrangements		1	1
	Hindsight 20-20	If X had been done, then Y would have been possible	3	4
	Initializing plant		10	22
	Aftermath	What now? How is the situation after the closure of the plant?	9	24
	Interregnum	The intervening period between handover from POABS to TMC to CED	3	8
	“It shut down, and then the corporation got stuck with it, and asked now what to do. That’s when they started looking at alternatives. Obviously, they were looking at other places where they can set up, they were looking at ten places where they could decen...”		1	1
	land acquisitions	Issues with land acquisitions	4	5
	Legal Recourse		13	39
	'As per the law...'		11	31
	Legal viewpoint	From the viewpoint of the judiciary	2	7
	LSG v. LSG		8	18
	Mafiazation	The proliferation of illicit waste mafia in Trivandrum	1	5
	Militarization	Effects of increase in police presence in the daily lives	10	21
	Narratives of Hope	Tales of future and reflection of the past	4	21
	Narratives of Violence	Physical violence coming to the fore	3	8
	Parleys	Attempts by the state govt. or the corporation or the VGP on the central govt to discuss or mediate between the protesting parties	6	24
	GoK's role	What the GoK has done WRT the conflict include: Talks Legal documents Orders etc	10	32
	Perceptions of Political Representatives	Perception about Political Representatives, including Opposition and Parties in power and others	3	5
	Negative	Feelings of mistrust	6	11
	Perceptions of waste	Perceptions of waste from	2	3

		both Vilappilsala and TVM		
	problem framing of Waste Management	Waste management as a problem that needs to be solved and one that the city is bound to have	4	17
	Profiting from the plant	Arrangements made to derive value out of discard	2	2
	Quick History	Quick history of the events of the protests from either side	11	45
	Remedies by TMC	The remedies that the TMC used(tried to use) to quell the opposition and to continue the operation of the TSDF	3	3
	Resistance		1	1
	Initial Phase	Early resistance during siting of plant	17	46
	Reactions to the protests	How the protests were dealt with by various Govt. agencies, LSG(if applicable)	8	15
	Attempts to derail	Sabotage(claimed)	1	7
	Later Phase	Second Phase(Phase under discussion) from approx. 2011 to 2013	24	201
	Contra the law	Defying the courts and related actions	3	5
	Major Issues	Contentions put forward by protestors	4	12
	Organisation of protests	The organisation involved as well as the way in which these bodies were organised	17	72
	Role of the VGP	What was the VGP doing in the meanwhile?	7	16
	Tactics of protests	the various strategies and tactics used by the protesters	15	84
	resolution by TMC	Resolutions and solutions proposed by the TMC	2	7
	Role of Women in protests		8	25
	Rules of operation of plant	What were the rules for the setting of the plant?	5	10
	Rurbanity in Trivandrum		6	9
	City Solidarity	Protests from within the city	3	4
	City Vs PU		3	4
	Scale	Issues of scale and larger web of connections	4	10
	Schism	differences of opinion within the protesters' camp	14	44
	Sabotage and subterfuge	Allegations of 'Terrorists'	6	8
	Scientific opinions	Opinions given by experts	16	44
	Self-description	How the people of V describe about the struggle	1	9
	Siting of plant	Misinformation regarding the nature of the land acquisition	23	51

	Topology and geography of site		11	16
	Trust	Trust deficit between TMC and other actors. The construction/ destruction of trust Therefore legitimacy	2	2
	Mistrust(of science and policy decisions)		3	8
	Vilappilsala in Policy circles	The impact and the effect of Vilappilsala in policy making	4	11
	Waste management before Vilappilsala	The existing facilities for Trivandrum's waste management before commissioning Vilappilsala	9	23
	We were exploited	Tales of exploitation by proxy	1	1
	workings of the plant	How the plant worked	15	42
	Lapses in procedures of operation	Lapses in SOP in the working of the plant	18	71
	Specifics of SWM		7	22

2. 2nd cycle of codes: Emerging themes from the field data

II. Codes\\Mid-level themes

	Name	Description	Files	References
1	Alternate institutional mechanisms	Creation of alternate institutions in response to perceived failure of existing ones	4	8
2	Design	Design lapses in the siting and in workings	4	13
	Unintended consequences	Unintended consequences of the design and of “solutions” for issues with the design	1	1
	Waste management before Vilappilsala	The existing facilities for Trivandrum's waste management before commissioning Vilappilsala	9	23
	workings of the plant	How the plant worked	15	42
	Lapses in procedures of operation	Lapses in SOP in the working of the plant	18	71
	Specifics of SWM		7	22
3	Effects of Waste Plant in Lives of V	Both Physiological, Psychological as well as Socio-Cultural	2	2
	Militarization	Effects of increase in police presence in the daily lives	10	21
	Physiological and Psychological	the primary reasons for protests, including the issues that the protestors faced while the plant was working	25	83
4	Engagement with wider audiences	The increasing attention that the case started bringing and	7	15

		the engagement of others		
5	Identity formation	How a peri-urban identity forms	0	0
	Adapting to the plant		2	3
	ascription of stigma to the place	How others describe Vilappilsala in day-to-day conversations	2	2
	Economical ties	Work and livelihood connections	13	29
	Identity formation	significance of V to its residences	4	7
	Self description	How the people of V describe about the struggle	1	9
	Sociability	Affecting the maker in which social interactions occurred.	3	5
	Socio-Cultural Effects of the plant	The changes that took place after the plant was established.	10	22
	Stigmatization	Stigma caused due to location of plant	6	12
6	Initializing plant		10	22
	Interregnum	The intervening period between handover from POABS to TMC to CED	2	7
7	Legal Recourse		13	39
	'Arrogant TMC'	Instances where the TMC is characterised as Callous and Cavalier	7	19
	'As per the law...'		11	31
8	Legal viewpoint	From the viewpoint of the judiciary	2	7
9	LSG v. LSG		8	18
10	Narratives and Discourses	The framing, selecting and telling of discourses and narratives on waste and its management	0	0
	False pretences(discourses)	The pretenses under which the land was taken up by the GOK/TMC	5	7
	Promises of development	Discourses of development	5	7
	We were exploited	Tales of exploitation by proxy	1	1
	Narratives of Hope	Tales of future and reflection of the past	4	21
	Narratives of Urgency-Crisis	The corporation's narratives of what would happen if the plant ceases to be. Risk portrayal?	11	17
	Narratives of Violence	Physical violence coming to the fore	3	8
11	Parelys	Attempts by the state govt. or the corporation or the VGP on the central govt to discuss or mediate between the protesting parties	6	24

	GoK's role	What the GoK has done WRT the conflict include: Talks Legal documents Orders etc	9	31
12	Perceptions of Political Representatives	Perception about Political Representatives, including Opposition and Parties in power and others	3	5
	Negative	Feelings of mistrust	6	11
13	Perceptions of waste	Perceptions of waste from both Vilappilsala and TVM	2	3
	problem framing of Waste Management	Waste management as a problem that needs to be solved and one that the city is bound to have	4	17
14	Profiting from the plant	Arrangements made to derive value out of discard	1	1
	Financial arrangements		1	1
15	Quick History	Quick history of the events of the protests from either side	11	45
16	Resistance		1	1
	Initial Phase	Early resistance during siting of plant	17	46
	Reactions to the protests	How the protests were dealt with by various Govt. agencies, LSG(if applicable)	8	15
	Attempts to derail	Sabotage(claimed)	1	7
	Later Phase	Second Phase(Phase under discussion) from approx. 2011 to 2013	24	201
	Contra the law	Defying the courts and related actions	3	5
	Major Issues	Contentions put forward by protestors	4	12
	Organisation of protests	The organisations involved as well as the way in which these bodies were organised	17	72
	Role of the VGP	What was the VGP doing in the meanwhile?	7	16
	Tactics of protests	the various strategies and tactics used by the protesters	15	84
	Role of Women in protests		8	25
	Schism	differences of opinion within the protesters' camp	14	44
	Sabotage and subterfuge	Allegations of 'Terrorists'	6	8
17	Responses from TMC	Corporation's reaction	8	16
	Counter Tactics		4	12
	Rejoinders	Corporation's rejoinders	12	31
	Remedies by TMC	The remedies that the TMC used(tried to use) to quell the opposition and to continue the operation of the TSDF	3	3
	resolution by TMC	Resolutions and solutions proposed by the TMC	2	7
18	Rurbanity in Trivandrum		6	9

	City Solidarity	Protests from within the city	3	4
	City Vs PU		3	4
19	Scale	Issues of scale and larger web of connections	4	10
20	Siting of plant	Misinformation regarding the nature of the land acquisition	23	51
	land acquisitions	Issues with land acquisitions	4	5
	Rules of operation of plant	What were the rules for the setting of the plant?	5	10
	Topology and geography of site		11	16
21	Trust	Trust deficit between TMC and other actors. The construction/ destruction of trust Therefore legitimacy	2	2
	Mistrust(of science and policy decisions)		3	8
	Scientific opinions	Opinions given by experts	16	44
22	Vilappilsala in Policy circles	The impact and the effect of Vilappilsala in policy making	4	11
	Aftermath	What now? How is the situation after the closure of the plant?	9	24
	Hindsight 20-20	If X had been done then Y would have been possible	3	4
	Mafiazation	The proliferation of illicit waste mafia in Trivandrum	1	5

3. 3rd cycle of codes: emerging set of themes

III. Codes\\Thematic Framework

Research Questions	Name	Description	Files	References
	Engagement with wider audiences	The increasing attention that the case started bringing and the engagement of others	7	15
	Legal Recourse		13	39
RQ1	'Arrogant TMC'	Instances where the TMC is characterised as Callous and Cavalier	7	19
What were the mechanisms by which the resistance at Vilappilsala was organised and structured?	'As per the law...'		11	31
	LSG v. LSG		8	18

	Parelys	Attempts by the state govt. or the corporation or the VGP on the central govt to discuss or mediate between the protesting parties	6	24
	GoK's role	What the GoK has done WRT the conflict include: Talks Legal documents Orders etc	9	31
	Protests		1	1
	Initial Phase	Early resistance during siting of plant	17	46
	Reactions to the protests	How the protests were dealt with by various Govt. agencies, LSG(if applicable)	8	15
	Later Phase	Second Phase(Phase under discussion) from approx 2011 to 2013	26	270
	Contra the law	Defying the courts and related actions	3	5
	Major Issues	Contentions put forward by protestors	4	12
	Organisation of protests	The organisations involved as well as the way in which these bodies were organised	17	72
	Role of the VGP	What was the VGP doing in the meanwhile?	7	16
	Role of Women in protests		8	25
	Schism	differences of opinion within the protestors' camp	14	44
	Sabotage and subterfuge	Allegations of 'Terrorists'	6	8
	Attempts to derail	Sabotage(claimed)	1	7
	Tactics of protests	the various strategies and tactics used by the protestors	15	84
	Responses from TMC	Corporation's reaction	8	16
	Counter Tactics		4	12
	Rejoinders	Corporation's rejoinders	12	31
	Remedies by TMC	The remedies that the TMC used(tried to use) to quell the opposition and to continue the operation of the TSDF	3	3
	resolution by TMC	Resolutions and solutions proposed by the TMC	2	7
RQ2	Design	Design lapses in the siting and in workings	4	13
What were	Unintended	Unintended consequences	1	1

the conditions that led to conflict(s) in Vilappilsala?	consequences	of the design and of “solutions” for issues with the design		
	Waste management before Vilappilsala	The existing facilities for Trivandrum's waste management before commissioning Vilappilsala	9	23
	workings of the plant	How the plant worked	15	42
	Lapses in procedures of operation	Lapses in SOP in the working of the plant	18	71
	Specifics of SWM		7	22
	Perceptions of Political Representatives	Perception about Political Representatives, including Opposition and Parties in power and others	3	5
	Negative	Feelings of mistrust	6	11
	Profiting from the plant	Arrangements made to derive value out of discard	1	1
	Financial arrangements		1	1
	Rurbanity in Trivandrum		6	9
	City Solidarity	Protests from within the city	3	4
	City Vs PU		3	4
	Siting of plant	Misinformation regarding the nature of the land acquisition	23	51
	land acquisitions	Issues with land acquisitions	4	5
	Rules of operation of plant	What were the rules for the setting of the plant?	5	10
	Scale	Issues of scale and larger web of connections	4	10
	Topology and geography of site		11	16
	Trust	Trust deficit between TMC and other actors. The construction/ destruction of trust Therefore legitimacy	2	2
	Mistrust(of science and policy decisions)		3	8
	Scientific opinions	Opinions given by experts	16	44
RQ3	Alternate institutional mechanisms	Creation of alternate institutions in response to perceived failure of existing ones	4	8
How did the conflict in Vilappilsala influence the social-cultural	Effects of Waste Plant in Lives of V	Both Physiological, Psychological as well as Socio-Cultural	2	2

identity of residents?				
	Militarization	Effects of increase in police presence in the daily lives	10	21
	Physiological and Psychological	the primary reasons for protests, including the issues that the protestors faced while the plant was working	25	83
	Identity formation	How a peri-urban identity forms	0	0
	Adapting to the plant		2	3
	ascription of stigma to the place	How others describe Vilappilsala in day to day conversations	2	2
	Economical ties	Work and livelihood connections	13	29
	Identity formation	significance of V to its residences	4	7
	Self description	How the people of V describe about the struggle	1	9
	Sociability	Affecting the maker in which social interactions occurred.	3	5
	Socio-Cultural Effects of the plant	The changes that took place after the plant was established.	10	22
	Stigmatization	Stigma caused due to location of plant	6	12
	Narratives and Discourses	The framing, selecting and telling of discourses and narratives on waste and its management	0	0
	False pretences(discourses)	The pretenses under which the land was taken up by the GOK/TMC	5	7
	Promises of development	Discourses of development	5	7
	We were exploited	Tales of exploitation by proxy	1	1
	Narratives of Hope	Tales of future and reflection of the past	4	21
	Narratives of Urgency-Crisis	The corporation's narratives of what would happen if the plant ceases to be. Risk portrayal?	11	17
	Narratives of Violence	Physical violence coming to the fore	3	8
	Vilappilsala in Policy circles	The impact and the effect of Vilappilsala in policy making	4	11
	Aftermath	What now? How is the situation after the closure of the plant?	9	24

	Hindsight 20-20	If X had been done then Y would have been possible	3	4
	Mafiazation	The proliferation of illicit waste mafia in Trivandrum	1	5

URBAN INDIA

Urban India • Vol 43 • Issue II July-December, 2023 ISSN 0970-9045

A JOURNAL OF THE NATIONAL INSTITUTE OF URBAN AFFAIRS

Urban Resilience

Blue-Green Infrastructure

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‘Out of Sight, Out of Mind’: Periurban Narratives of Waste and Resistance in Vilappilsala, Kerala

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Abstract

National and regional agendas of urbanisation have pushed cities into nearby rural areas, creating liminal spaces which have often struggled to balance the environmental bads with economic growth. One such negative externality which is increasingly taking centre stage is that of waste generation and its management. With the carrying capacities of many cities being exceeded, planners and policymakers have turned to ‘managing’ their waste in nearby periurban areas, often out of the city’s reach, not to cause any discomfort but remaining close enough for accessibility. These strategies, however, have often run into significant resistance due to the different priorities and agendas that the urban and the non-urban residents possess. This paper details one such conflict analysed through the differing conceptions of waste and its disposal/treatment between two local self-governance institutions at Vilappilsala, Kerala.

Keywords: Periurban, Resistance, Waste Management, Kerala, Panchayati Raj

Introduction

“This is the story behind the closure, three years ago, of the waste treatment plant that made life hell for those living in its vicinity. This is a story of government and a municipal corporation losing out to a people’s movement” (Nair, 2015).

In March of 2023, many parts of the city of Kochi in Kerala were blanketed with thick acrid smoke coming from Brahmapuram, the city’s waste treatment plant turned landfill; the fires burnt for well over a week. Twenty-five years after the establishment of the waste processing plant, Brahmapuram has emerged as a major policy and administrative issue for the city of Kochi; the process has once again called into sharp focus the increasing difficulties of managing waste in the cities of Kerala and in India, at large.¹

¹Indeed, a similar location has been the Ghazipur landfill in Delhi, that has caught fire multiple times during the past years, and which has been the subject of much discussion and debate.

To
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CERTIFICATE

To whom it may concern

On behalf of the Research Committee 21 – Sociology of Urban and Regional Development of the International Sociological Association and the Local Organizing Team in Delhi, India, I am delighted to confirm that **Ashish Prabhakar** participated at our RC 21 annual conference “In and Beyond the City: Emerging Ontologies, Persistent Challenges and Hopeful Futures” in New Delhi, India from the 18th to the 21st of September 2019.

Ashish Prabhakar has been author of the following accepted contribution:

Paper: “**Conflicts among LSGIs and the peculiar case of Vilappilsala: Democracy in action?**”, presented in stream “S15-New dynamics of peripheral urbanization”.

With best regards,



Professor Talja Blokland

RC21 President



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.....*Ashish Prabhakar*.....

presented a paper and participated in the Fourteenth Annual International Conference on

Public Policy and Management

held at the Indian Institute of Management Bangalore

from 22nd to 24th August 2019.

Hema Swaminathan
Hema Swaminathan
Chairperson, Centre for Public Policy

Periurban Spaces as Transitional Places: A Situated Urban Political Ecology Approach to Examine the Conflict on Municipal Solid Waste at Vilappilsala, Kerala

by Ashish Prabhakar

Submission date: 27-Jun-2024 12:05PM (UTC+0530)

Submission ID: 2409311113

File name: Ashish_Prabhakar.docx (16.62M)

Word count: 44804

Character count: 251840

Periurban Spaces as Transitional Places: A Situated Urban Political Ecology Approach to Examine the Conflict on Municipal Solid Waste at Vilappilsala, Kerala

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