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## **Urban Ponds, Environmental Imaginaries and (Un)commoning: An Urban Political Ecology of the Pondscape in a Small City in Gujarat, India**

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**ABSTRACT:** Urban ponds in India have for a long time been used for multiple purposes and have been accessible to a wide range of social groups; they thus often represent an urban commons. However, recent transformations of urban ponds into infrastructure that serves more limited uses have been accompanied by enclosure and social exclusion. Using an urban political ecology approach that is enriched with the concepts of environmental imaginaries and (un)commoning, this paper examines the ideational foundations and societal mechanisms underpinning the transformation of the pondscape of Navsari, a small city in the state of Gujarat. Based on interviews and field observations, the study found that the small-town elite's imaginary of the 'modern city' underpinned the shift to the ponds becoming part of Navsari's drinking water infrastructure; this led to the enclosure of the ponds and thus the ideational and physical separation of residents from these waterbodies and the exclusion of traditional user groups. This socio-ecological transformation of the pondscape, however, was not characterised by simple, linear processes of uncommoning driven by local elites: the dismantling of the urban commons (in the form of waste dumping by multiple actors) largely preceded the creation of infrastructure; enclosures and exclusions remained imperfect and spatially variable; and in some places informal resource-use rules continued or were recreated by local communities. This research points to how important it is for urban political ecology to consider the imaginaries and practices of multiple actors – including those beyond the metropolitan areas – in the construction of a nuanced narrative of dispossession in the neoliberal city.

**KEYWORDS:** Urban political ecology, urban commons, environmental imaginaries, ponds, Gujarat, India

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### **INTRODUCTION**

During an exploratory field visit to Gujarat, the city of Navsari caught our attention. Helpful municipal officers led us through a very ordinary Indian cityscape to a few extraordinary and recently created parts of the local urban environment which they proudly presented: a meticulously manicured park that had been built on a former dumpsite, an impeccable Olympic-size public swimming pool, and a tranquil tree-lined pond with ducks. Each of these had been highly engineered and fenced in; the pond had actually been altered to serve as a drinking water reservoir. These three public works in Navsari exemplified a socio-ecological transformation that is taking place in urban India.

This paper will focus on the recent transformation of Navsari's pondscape, an important aspect of the city's socio-nature. Urban ponds have recently been conceptualised as an important part of a city's waterscape; they are considered to be a 'composite resource', being composed simultaneously of water (for growing fish, washing, bathing, etc), land (to build on after filling), and public space (for recreation and social activities) (Cornea et al., 2016). Furthermore, urban ponds represent undervalued spaces of biodiversity (Hill et al., 2018) and their ecosystem functions are increasingly recognised as 'blue infrastructure' in the climate change and urban resilience literature (Childers et al., 2015; Voskamp and Van de Ven, 2015). In India, particularly in semi-arid areas (including the studied region of Gujarat), urban ponds perform vital functions including water retention during monsoonal downpours, water storage in the dry season, groundwater recharging, and sewage treatment (Bassi et al., 2014); on the other hand, urban flooding in India appears to be linked to the gradual destruction of urban wetlands, lakes, ponds and tanks (CSE, 2016; Sundaresan et al., 2017).

Studies of India's urban and urbanising pondscape have concentrated on metropolitan areas of South India and have pointed to the degradation of ponds through land reclamation (encroachments and planned housing schemes, government buildings, parks, etc), unintended and deliberate disruptions of inflow and drainage networks, and the pollution of ponds by solid and liquid waste (including human waste) (Ramachandraiah and Prasad, 2004; Mariganti, 2011; Sundaresan, 2011). These physical transformations have been interrelated with social changes, including a reduced dependence on ponds and the marginalisation of their traditional users (D'Souza and Nagendra, 2011). Some authors have interpreted these socio-ecological changes as a loss of the commons and a shift towards private and state property regimes (Ramachandraiah and Prasad, 2004).

In Navsari, as elsewhere, the number and size of ponds has decreased over the past 50 years due to land reclamations; many ponds and their tributaries have also become polluted with wastewater and clogged with solid waste. Since the early 2000s, however, there have been initiatives to revitalise these water bodies in a manner similar to pond restoration initiatives in large Indian cities such as Bengaluru (D'Souza and Nagendra, 2011; Sundaresan, 2011; Nagendra and Ostrom, 2014), Hyderabad (Mariganti, 2011), Madurai (Sundaresan et al., 2017) and Kolkata (Bose, 2015). In these cities, efforts to restore urban water bodies have often been founded on an environmental imaginary that is concerned with nature conservation, urban aesthetics and recreation; the resulting new forms of enclosure of ponds have further excluded the lower classes and their livelihoods and domestic activities (D'Souza and Nagendra, 2011; Bose, 2015).

In this paper, we seek to examine such socio-ecological processes by studying the recent transformation of Navsari's pondscape. We look beyond simple narratives that are based on the assumed linear processes of the disappearance and degradation of ponds because of population growth, urbanisation, dismantled community organisations and corruption; instead we engage in an urban political ecology (UPE) analysis of the diverse socio-ecological processes that impact the city's pondscape. Apart from UPE's attention to power, politics and scale (Swyngedouw and Heynen, 2003), our study puts particular emphasis on the urban environmental imaginaries that different actors attach to urban ponds; we also consider the shifting governance of ponds as an urban commons, commodity, or public good. In particular, the paper asks (i) how different ponds in Navsari have been transformed; (ii) what urban environmental imaginaries have underpinned these transformations; and (iii) what processes of uncommoning and recommoning have accompanied and influenced these changes.

With this paper, we seek to contribute to knowledge on India's changing urban pondscape by nuancing common narratives of linear physical-environmental and societal-communal degradation; we aim also to enlarge the spectrum beyond metropolitan areas to include the situation of small urban agglomerations. In the process, we expect to contribute to UPE through the consideration of ponds as an important part of the waterscape, one which may point to governance trajectories that are different from, and more complex than, linear processes of commodification or dispossession. A UPE framework

that is enhanced by the concepts of the urban commons and environmental imaginaries allows for a more thorough examination of the ideational and communal dimensions of socio-ecological transformations.

### **AN URBAN POLITICAL ECOLOGY OF THE PONDSCAPE**

Urban political ecology represents an analytical framework for understanding cities and urban processes as a dialectic between, on the one hand, environmental processes and, on the other, social, economic and political dynamics; its aim is to "offer insights into creative pathways toward more democratic urban environmental politics" (Heynen, 2014: 598). Referring to the urban Indian context, Coelho (2018: 28) argues that any ecological intervention, including a lake restoration or the building of a drainage system, would necessitate prior UPE analysis into the "complexity of socio-natural relations embedded in the landscape, and the potential discriminatory effects and differential values that the intervention would produce".

The study of water, particularly piped drinking water, has been an important component of UPE since its beginnings in the late 1990s. The waterscape has been conceptualised as "not only a physical geography and a material landscape, but also a symbolic and cultural landscape of power" (Swyngedouw, 2004: 29); water infrastructures are seen as historically and geographically situated artefacts of cultural, social and political significance (Swyngedouw, 2004). By analysing who controls (the production of) water infrastructure and the supply and distribution of water in cities, the concept of the waterscape allows larger, multiscale power relations to be examined. Industrialisation and commercialisation of urban water supplies in the Global South, for example, not only change water access relations but also redistribute power, particularly from the urban poor to local elites and corporate actors (Bakker, 2003a). Recent UPE studies, however, also pay attention to seemingly less powerful actors than the state or corporations; they have taken into consideration the agency and relative power of non-state non-corporate actors in the complex co-construction of local waterscapes (Ahlers et al., 2014). Truelove (2019), for example, points to *everyday* practices, infrastructures, and governance that produce Delhi's fragmented waterscape in the grey zone between formality and informality across planned and unplanned settlements.

In parallel to the increased attention to everyday practices and infrastructures, the perspective of the waterscape has also been transposed beyond piped water (Karpouzoglou and Vij, 2017) to include rivers and ponds. Cornea et al. (2016: 396) used the notion of the pondscape to study urban ponds as "both a site of social relations and a biophysical resource"; they examined everyday negotiations for accessing these waterbodies whereby poorer pond users were able to temporarily challenge dominant class and caste relations through the use of local institutions such as neighbourhood clubs.

This paper builds on these conceptualisations of the waterscape to examine the recent transformation of ponds in Navsari. Ponds are seen as manifesting embedded power relations and diverse cultural meanings which shape their transformation through both official projects and the everyday practices of multiple actors. The destruction, degradation or restoration of ponds are not only biophysical processes but also signify sociopolitical and institutional changes; we examine these changes using the concepts of (un)commoning, which we find to be particularly suitable in the case of 'composite resources' such as ponds. Furthermore, we consider the power required to transform or restore ponds to be both relative and situated (Cornea et al., 2017); the study of multiple actors is therefore necessary as is the allowance for different material outcomes within a single pondscape. The transformation of ponds is also dependent on their attached meanings; we attempt to capture these through the concept of environmental imaginaries, which not only refers to values given to existing ponds but also encompasses imaginations of the 'better' pondscape that can be created.

## Environmental imaginaries

The term environmental imaginaries has been introduced in political ecology to highlight the symbolic aspects of landscapes and waterscapes, both descriptive and prescriptive. Environmental imaginaries can be described as "a way of imagining nature, including visions of those forms of social and individual practice which are ethically proper and morally right with regard to nature" (Watts and Peet, 1996: 263); they thus form primary sites of normative, ideological contestation. Watts and Peet (1996) propose investigating how these imaginaries are formed; they point out that imaginaries guide material-environmental practice and in this way open up the inquiry into how environmental imaginaries shape socio-nature.

It is this line of inquiry that has been taken up by UPE in general and in the study of urban waterscapes in particular. Swyngedouw's (1999, 2007) work on Spain, for example, has demonstrated how ideologies and changing narratives of modernity and development were inscribed in, and manifested through, the transformation of the country's waterscape; with the ascent of the nationalist, and later fascist, political ideologies in the first half of the 20th century, the Spanish state attempted to regenerate a lost empire and to control diverse and diverging regions through the construction of regulated waterways and hydrological power infrastructure. Gandy (2004), on a smaller scale, has described how the waterscapes of 19th century European cities were thoroughly reworked through civil engineering as the imaginary of the modern city emerged. "[E]merging ideologies of cleanliness and bodily conduct" (Gandy, 2004: 367) found expression in changing attitudes to urban water and in newly forged connections (via the water closet) between defecation and water. In colonial India, too, water supply projects became increasingly founded on an environmental imaginary of a modern, hygienic city; centralised, piped networks were consequently favoured over decentralised water supply from ponds, tanks and wells (Gandy, 2006; Sharan, 2014). This type of infrastructure was also created in order to set apart the coloniser's quarters from the native town (Mann, 2007). Using the example of a Muslim-dominated neighbourhood in Mumbai, Anand (2017) showed that similar processes of exclusion through modern centralised drinking water infrastructure continue into our current times and contribute to the definition of citizenship in the India city.

These and other studies related to UPE have established an understanding of the waterscape as being influenced by imaginaries. Recently, UPE seems to have renewed this interest as "urban environmental imagination makes visible or invisible any number of potential modes of interaction between the human and the non-human and enables the creation of one kind of urban environment instead of another" (Gabriel, 2014: 40).

In the wake of the intensified economic liberalisation of the 1990s, imaginaries of the urban waterscape in contemporary India became linked to multiple broader imaginations of the city. In the mid-2000s, large cities – megacities – became the main target of the Jawaharlal Nehru National Urban Renewal Mission (JNNURM); the urban imaginary was adjusted to a global scale, the 'world city' and the 'world class city'. This shift was in the interest of investors, developers and the rich (Banerjee-Guha, 2009) and acted to the detriment of the urban poor, particularly 'slum' dwellers who were increasingly depicted as a nuisance (Ghertner, 2011), as dirty (Zimmer, 2012), and as a contaminating element (Mathur, 2012) or 'polluting other'. This 'neoliberal city' (Banerjee-Guha, 2009) has been marked by city branding and by large signature projects that involve slum demolitions, land grabs and accumulation by dispossession (Mahadevia, 2011; Banerjee-Guha, 2013).

Such signature projects have also included interventions in India's urban waterscapes (Baviskar, 2011; D'Souza and Nagendra, 2011; Coelho and Raman, 2013; Bose, 2015); of these, the Sabarmati Riverfront Development project in Ahmedabad, Gujarat's largest city, is perhaps the most relevant for this paper. Official discourses around this 'restoration' project justified it as being aimed at flood control, beautification, and the need to give the riverfront back to the public. The creation of this 'Paris-like' riverfront, however, also displaced 14,000 households, small shops, and street vendors, who had to give

way to corporate investors (Mathur, 2012). According to Desai (2011), the purpose of the 'urban spectacle' on the Sabarmati and its banks was to correct the city's and the state's negative image after the communal violence of 2002. The author not only examined the official, hegemonic imaginary of a dynamic 'entrepreneurial city'; she also studied the discursive challenges from lower class residents who framed the reimagined Ahmedabad as an exclusive 'expensive city' and considered the points of view expressed by a group of intellectuals who promoted an alternative imaginary of an 'inclusive city'.

In the case of smaller urban settlements that were not at the centre of the JNNURM and neoliberal urban reform, it is arguably even more relevant to consider multiple urban environmental imaginaries beyond that of the 'neoliberal', 'world class' or 'entrepreneurial' city. Indeed, there is a growing body of research which sees India's small cities as diverse, unique and with autonomous imaginations (Denis and Zérah, 2017). Cornea et al. (2016), in an investigation targeted specifically at the pondscape, found a range of imaginaries to be at play in Bardhaman, West Bengal: some ponds were ignored by the municipality while others were considered to be 'slum infrastructure'; at the same time, neighbourhood clubs often saw these water bodies as a source of economic revenue and social power. To our knowledge, however, the literature has so far not studied visions linked to water restoration projects in small Indian cities. This paper attempts to fill this gap by studying the diverse imaginations underlying the transformation of the pondscape in a small town setting where 'aspirational urbanism' (Wang et al., 2015) may take other forms than that of the world class city. The imaginaries of state, corporate, upper and middle class actors would seem powerful enough to have their visions materialise – if rarely in a complete fashion (cf. Benjamin, 2008) – however this research also examines the shifting meanings that ordinary residents attach to urban ponds, as these may enable or obstruct official projects.

### **Commoning and uncommoning**

As indicated in the previous subsection, the imaginaries of the urban middle and upper classes have often been turned into realities that involve processes of exclusion and dispossession of the urban poor, particularly in larger Indian cities. In order to examine similar processes in the small city of Navsari, we chose to use the concepts of 'commoning' (creating commons) and 'uncommoning' (dismantling commons) because they allow the capturing of multidirectional processes and of the multiple actors who bring these processes about. The concept of uncommoning is further appropriate because ponds in Navsari, as elsewhere, were originally used and managed as a commons. (We understand a commons as a system or a space producing a bundle of resources and services which are, at least in part, used or held collectively; the resources are thus more or less shared and the commons is regulated by communities through sets of changing and malleable rules.) Finally, the concept of (un)commoning is suitable for this study because of its links to urban imaginaries; for instance, the creation of more legible rules of access to urban resources – as in state or private property regimes created through the dismantling of commons – seems to be part of the elites' urban envisioning.

UPE studies have long focused on water or, more precisely, on the associated service of providing drinking water. Water can be considered a common-pool resource in that it is difficult and/or costly to exclude particular individuals or groups from using it, while at that same time, in contrast to public goods, it is subtractable, that is to say it can be overused, diminishing its value for other users (Ostrom, 1990). UPE research has traced its (difficult and costly) commodification under public property regimes (particularly at the end of the 19th and beginning of the 20th century; see Swyngedouw, 1997, and Rattu and Véron, 2015) and also, more recently, under private property regimes (Bakker, 2003b; Kaika, 2003; Loftus, 2006). Ponds are not only water, however, and their governance trajectories differ from one to the other and are arguably more complex than when simply considering drinking water. Ponds provide a bundle of resources and services which have variable and often ill-defined goods-characteristics; they produce resources that may be private goods (for example, fish), public goods (open space used for social gatherings), and common-pool goods (water for washing). The commodification of ponds appears to be

even more challenging than that of water, and they are therefore often used as a commons and their governance is often hybrid (Nagendra and Ostrom, 2014).

Following Ostrom's (1990) seminal work emphasising the role of local community institutions in managing common-pool resources, an abundant literature has evolved on natural resource commons in rural contexts; more recently, the concept has been applied to other domains including urban settings. While 'urban commons' is a term most often used generally for commons that are situated in cities, some authors have theorised urban commons more specifically (Huron, 2015). It has been recognised, for example, that apart from 'natural' or ecological commons such as urban waterbodies or landfills, cities encompass cultural or civic commons such as sidewalks or a neighbourhood's ambiance (Gidwani and Baviskar, 2011); furthermore, urban commons are constantly being created by community members through everyday practices that are referred to as commoning (Bresnihan and Byrne, 2015). They are "made" (Gidwani and Baviskar, 2011: 43) and "produced through intensive patterns of use and collective habitation" (Blomley, 2008: 311). Uncommoning occurs if they are not maintained through everyday practice; recommoning takes place with their revitalisation and re-emergence. Urban commons, in a process of more deliberate uncommoning or enclosure, are also under threat of becoming appropriated by capitalists; an example of this is the appropriation of the benefits of a revitalised neighbourhood or riverscape by the tourism industry or the real estate sector (Blomley, 2008; Gidwani and Baviskar, 2011; Harvey, 2013). For some, the reclamation of urban commons from capitalist appropriation represents resistance to neoliberal urbanism and thus becomes a political project (Hardt and Negri, 2009; Chatterton, 2010). In India, however, as Benjamin (2008, 2011) shows, commoning is often related to 'occupancy urbanism' whereby residents negotiate with authorities and co-create the city beyond the visions of the master plan.

Two further characteristics set the urban commons apart from its rural counterpart. First, urban commons are created and maintained in a 'saturated space'; saturation here means not only high population density, but also a large variety of land uses and financial investments in the same space. Second, an urban commons is created by the coming together of relative 'strangers' (Huron, 2015); urban dwellers tend to come from different places, ethnicities and cultural backgrounds and may not have lived together long enough to create generalised trust (Huron, 2015).<sup>1</sup> While the sharing of a commons may be more necessary in an urban area than a rural area, conflicts between different users are thus also more likely.

As indicated above, an important dimension of (un)commoning is the creation of enclosures, a well-studied issue in the political ecology of nature conservation (Neumann, 2004). Much of the literature on the creation of urban commons is very critical of enclosures, sometimes depicting the two as oppositional processes (Jeffrey et al., 2012); however, urban commons and enclosures are linked – even if their relationship is contradictory – in that the creation of a commons often necessitates some sort of enclosure and exclusion (or uncommoning) (Harvey, 2013). "One common may be protected at the expense of another" (Harvey, 2013: 70), and this can involve the creation of a commons at a larger geographical scale which excludes local resource users; an example of this is the local fencing off of a nature reserve to protect 'global' biodiversity. Some basic normative questions are therefore crucial in a politics of urban commons. First, who is (un)commoning and for what purpose? Second, who stands to gain from (un)commoning and who stands to lose? (Harvey, 2013)

While most of the above-cited theorisations are rooted in North American and Western European experiences, some authors have reflected specifically on the trajectory of urban commons in India. Due to India's rapid urban expansion, many typically rural commons, such as grazing lands or irrigation ponds,

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<sup>1</sup> We see these factors as gradual rather than absolute differences between rural and urban commons. Rural land and resource use can also be conflict-ridden, as rural communities are often heterogeneous and, particularly in the Indian context, divided by caste and (religious) community. Further, where people have known each other for generations it may be mistrust, rather than generalised trust, that is deeply rooted.

have recently become part of the urban periphery where they are often diminished and degraded (Narain and Vij, 2016). In the case of ponds, uncommoning has often been explained as being part of socio-economic changes linked to urbanisation; the reference here is to a shift away from livelihoods that depend on ponds, which has then led to the deterioration of ponds into openly accessible dumpsites (Ramachandraiah and Prasad, 2004; D'Souza and Nagendra, 2011; Mariganti, 2011; Sundaresan, 2011). Within the city, the commons character of landscapes has also been destroyed, as we have already pointed out with reference to the commodification of the Sabarmati River and riverbank in Ahmedabad. Efforts to reclaim ponds as urban commons on a larger geographical scale have been made through ecological restoration projects (D'Souza and Nagendra, 2011; Coelho and Raman, 2013; Bose, 2015); however, these projects involved new enclosures, exemplifying the linking of the processes of commoning and uncommoning. According to Benjamin (2011), planning for (the restoration of) commons unwittingly and paradoxically – but inevitably – morphs them into a singular form of property, thus implying their dismantlement.

In line with our general approach, this study examines the involvement of multiple actors in practices of (un)commoning. We have taken what we believe to be a novel approach by situating this analysis in a small Indian city, and anticipate that our investigation will contribute to both empirical and theoretical literature.

## **METHOD**

In order to address the question of (un)commoning and environmental imaginaries as they relate to ponds in a small Indian city, this paper draws upon data acquired during nine months of fieldwork by the first author in 2013 and in 2014 and short field visits to Navsari by the other two authors during that same period. This study is part of a larger research endeavour on environmental governance in India, during the course of which most of the relevant local key informants in Navsari (about 70 people) were interviewed. This study uses information from 31 qualitative key informant interviews in which ponds were discussed; interviewees included 13 government officers (municipal officers and engineers, town planners, district administrators, forest officers), seven elected officials (municipal councillors and mayors), 11 others (former elected officials, local politicians, advocates, librarians, representatives of NGOs and clubs, a fish contractor, a pond guard, etc). Additionally, interviews with 22 residents, or groups of residents, living near ponds were conducted, particularly near the two ponds we selected for in-depth study (see below); these included coincidental encounters as well as interviewees selected by the snowballing method. The interviews were conducted mostly in Gujarati and in Hindi; summary interview notes were then written up in English, coded manually and analysed with the help of qualitative research analysis software. This qualitative data set was complemented by field observations, photo documentation by residents, and a questionnaire survey of 90 households which included questions on pond access and water supply. The households for the survey were selected randomly within three purposively selected ward areas which represent different socio-economic characteristics and locations in relation to the city centre.

The methodology for the larger project was developed before we finalised the conceptual framing for this paper, and some interviews therefore did not directly address the issues of imaginaries or commoning related to ponds; nevertheless, through a systematic analysis of a relatively large number of interviews clear patterns emerged.

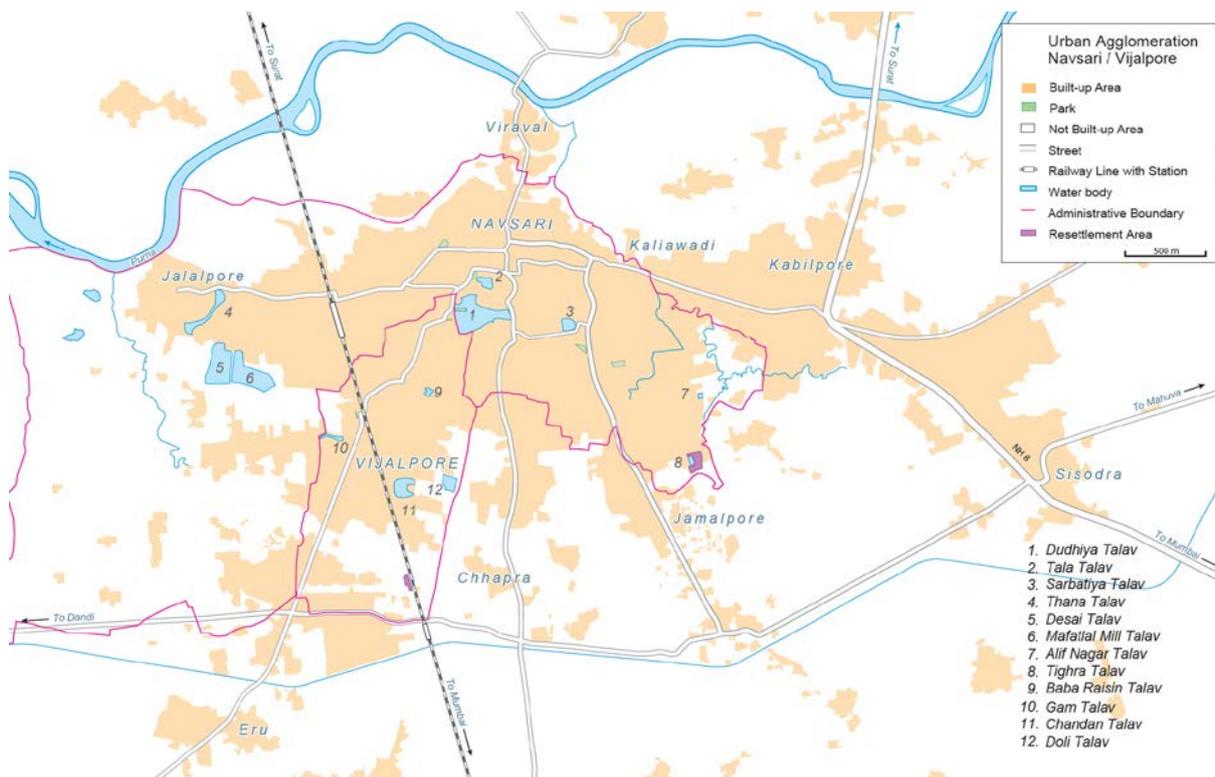
## **NAVSARI AND ITS PONDSCAPE**

Navsari is said to have a more than 2000-year history of settlement. It was part of the princely state of Baroda until, in 1949, Baroda merged with Bombay State and joined the Indian Union; when the new states of Gujarat and Maharashtra were formed in 1960, Navsari took its place as one of Gujarat's smaller

cities. It is located about 30 km south of the fast-growing city of Surat, in Gujarat’s ‘Golden Corridor’ between Ahmedabad and Mumbai, the highly developed, agriculturally rich, urbanised and industrialised coastal belt. It has an important diamond industry that has attracted migrants from other parts of Gujarat and India. The urban area is divided in two adjacent municipalities, that of Navsari proper (pop. 171,071) and that of Vijalpore (pop. 81,264), with decennial growth rates of 28% and 53% respectively. The population is predominately Hindu; about 10% are Muslim (Census of India, 2011).

The small conurbation of Navsari and Vijalpore (hereafter simply referred to as Navsari) lies on the banks of the Purna River. The river is influenced by the sea tide several kilometres upstream so that salinity intrusion and a tidal change in flow direction characterise the local hydrology. Furthermore, Navsari is endowed with a number of natural and human-made ponds (Figure 1), some of which were originally connected to each other and the river; these ponds traditionally served as water storage tanks and helped in groundwater recharging. Two centrally located ponds, Dudhiya Talav and Sarbatiya Talav, have been partly filled, the former in the 1960s and the latter around 150 years ago. Today, the agglomeration has twelve (peri-)urban ponds, or *talavs*. (We will use ‘pond’ and the Gujarati term *talav* interchangeably.) Except for one that is privately owned, ponds are owned by the State Revenue Department and development rights lie with the municipalities.

Figure 1. Map of ponds in Navsari.



Source: Google Earth 2009 and 2011; drafted by A. Zimmer; cartography by A. Patel.

Table 1. Recent transformations of urban ponds in Navsari.

Name of pond	Location	Physical changes	Current uses
Dudhiya Talav	Central part of Navsari and Vijalpore	Pond bed lined and disconnected from groundwater system; fed by canal water from Ukai Dam; fenced in; parks and greenery created on the banks	Water storage for piped drinking water supply; aesthetics; recreation (walking)
Sarbatiya Talav	Central part of Navsari	Embankments reinforced; pond bed lined; fenced in; some trees planted on the banks	Rainwater harvesting; aesthetics
Tala Talav	Central part of Navsari	Embankments reinforced	Rainwater harvesting
Thana Talav	Peri-urban area of Navsari (formerly Jalalpore)	Embankments reinforced; pond bed lined; disconnected from natural inflow and outflow; sewage lines built nearby; partly fenced in; some trees planted on the banks	Rainwater harvesting; commercial fishing; solid waste disposal; wastewater; recreation (boating abandoned)
Desai Talav	Peri-urban area of Navsari (formerly Jalalpore)	Pond created in 1997; fed by canal water from Ukai Dam and inflow from Mafatlal Talav; dredged and deepened; fenced and walled in; pisciculture introduced to purify water	Water storage; angling; solid waste disposal
Mafatlal Mill Talav	Peri-urban area of Navsari (formerly Jalalpore)	Pond created by textile company; since 1978 fed by canal water from Ukai Dam	Industry (textile mill); washing (professional and household); gathering of lotus flowers; solid waste disposal
Alif Nagar Talav	Peri-urban area of Navsari	Created in mid-2000s near a college; fenced in; pisciculture introduced to purify water	Rainwater harvesting; fishing
Tighara Talav	Peri-urban area of Navsari	Partly filled by town planning scheme in 1990s and subsequent encroachments; tree planting (planned)	Rainwater harvesting; solid waste disposal
Baba Raisin Talav	Urban area of Vijalpore	No revitalisation initiatives	Wastewater; (dries up in summer)
Chandan Talav	Peri-urban area of Vijalpore	Revitalisation underway	Drinking water reservoir (under construction)
Gam Talav	Peri-urban area of Vijalpore	Construction of walking path planned; boating planned	Recreation (planned); (clean, dries up, summer)
Doli Talav	Peri-urban area of Vijalpore	Revitalisation planned	Emergency municipal dump; rag picking

Source: Authors' field observations and interviews, 2013-2014.

Like elsewhere in India, the ponds in Navsari were traditionally used for multiple productive and reproductive purposes including bathing, washing (clothes, utensils, animals, etc), fishing, and irrigation (at the urban periphery); furthermore, the talav continues to play an important role in the local culture, as expressed by the immersion of Ganesha idols in many of the city's ponds during a yearly Hindu festival.<sup>2</sup> Like elsewhere in India, Navsari's pondscape has undergone important transformations since the early 2000s. Table 1 provides a (necessarily incomplete) overview of the recent changes and the current uses of Navsari's urban ponds. It points to paradoxical processes in the pondscape: some waterbodies have been (partly) filled while others have recently been created; some ponds were used as wastewater and (municipal) garbage dumps while others were restored as drinking water reservoirs. Furthermore, hydrological regimes have been altered by bringing in water from an irrigation canal, lining pond beds, and manipulating inflows and outflows to other ponds and the Purna River.

Apart from residents polluting ponds and a textile company maintaining its private talav, the transformation of the pondscape has been primarily driven by government agencies, particularly Navsari Municipality. The municipal interventions were principally aimed at improving the drinking water situation (through the use of ponds to create reservoirs and rainwater harvesting infrastructure) and at the general beautification of the city (through landscaping their banks).

In the following two sections, we will zoom in on two contrasting cases to discuss environmental imaginaries and the processes of (un)commoning that are related to the transformation of Navsari's pondscape. The first case, the beautification and conversion of Dudhiya Talav into a drinking water reservoir, has generally been regarded as a successful revitalisation project and is acclaimed as 'best practice' (City Managers' Association Gujarat, 2003); it therefore allows us to identify how the urban ideal is imagined in the discourse of officials, and is a case where enclosure was officially successful. Furthermore, as best practice, Dudhiya Talav's revitalisation has informed other initiatives in Gujarat; for example, at the time of our field research the smaller and less prosperous Vijalpore Municipality was attempting to replicate the Navsari model in its restoration of Chandan Talav. Dudhiya Talav therefore represents a critical case. The second case study, of Thana Talav, is more typical. Located at the urban periphery of the former village area of Jalalpore, the pond has experienced a series of governmental interventions, including an incomplete attempt at beautification and an attempt at restoration for the purpose of rainwater harvesting. Although the pond was partly fenced in, government control over it was not fully established and multiple uses continued there. This allowed us to examine not only user conflicts but also nascent recommoning practices. These and other ponds in Navsari also gave us the opportunity to study ordinary residents' imaginaries as they related to ponds.

## **DUDHIYA TALAV: ENCLOSURE FOR THE CREATION OF A MODERN CITY (CENTRE)**

### **Socio-ecological transformation of a pond into a water reservoir**

In the mid-20th century, Dudhiya Talav was a seasonal water body. As an elderly key informant remembered, there was a washing *ghat* (steps leading down to the water), people used to catch fish and to swim, buffaloes and occasional elephants belonging to passing circuses were bathed there, and Hindu idols were immersed in the pond. In the 1960s, however, large parts of the waterbody were reclaimed in order to build a number of institutional buildings, including the offices of Navsari Municipality, and the original pond was divided into Dudhiya Talav and the smaller Tala Talav. The open banks were subsequently encroached upon by informal settlements, including those of construction workers who had been employed to build the new institutional buildings nearby. Increasing amounts of wastewater

<sup>2</sup> There is also a local legend that explains the names of the two main central ponds, Dudhiya Talav and Sarbatiya Talav. According to this legend, a Hindu and a Muslim saint competed over the superiority of one belief system over the other. Proving his power, the Muslim saint converted the water of one pond into milk (*dudh*); the Hindu saint, no less powerful, reacted by converting the water of the other pond to juice (*sharbat*).

from surrounding residences and from institutional buildings, including two hospitals, flowed into the pond, which became a breeding ground for mosquitoes. Despite this situation, commercial fishing and professional washing continued in the pond and on its banks.

Parallel to the ongoing pollution of Dudhiya Talav, Navsari faced escalating problems with its drinking water supply which, since 1927, had been met from groundwater resources via municipal pumping stations and overhead tanks. A drop in the phreatic surface by several metres in the 1990s made pumping more costly and caused an increase in salinity intrusions, negatively affecting the potability of groundwater (City Managers' Association Gujarat, 2003; Tripathi et al., 2011). By the end of the 1990s, residents had to purchase bottled drinking water, and household appliances wore out quickly due to the hardness of the supplied water.

In response, Navsari Municipality embarked on a large-scale revitalisation project for the pond and its environs in 1999/2000; it did so with the financial assistance of various public sector institutions, including a grant from the Gujarat Water Supply and Sewerage Board, a loan from the revolving fund of the Gujarat Municipal Finance Board, and a loan from the state-owned Life Insurance Corporation of India (City Managers' Association Gujarat, 2003). The pond was dredged and lined with plastic sheets and, in an agreement with the Gujarat Irrigation Department, it began to receive canal water from the Ukai Dam. As a municipal officer explained, "We have (...) lined the talav because we are paying for the water! So it should not disappear". Sewage and storm water were diverted into a drainage system discharging into the Purna River. Raw water was now pumped from the pond to a water treatment plant which the municipality had constructed nearby; from there, the municipality began to distribute drinking water to households and community taps through an expanding piped system.

The banks of Dudhiya Talav were fenced in and partly lined with trees; saplings were provided by the Forest Department and planted by different educational institutions under the National Service Scheme; in some areas, small parks were created. In the course of the pond's revitalisation several nearby slums were also displaced. Navsari Municipality resettled 484 families in three waves (1999, 2001, 2003) to a site-and-service area adjacent to Tighara Talav; in Vijalpore, more than 100 families were relocated in two waves (2007, 2013) to a peri-urban area.<sup>3</sup> According to a municipal officer, the area around Dudhiya Talav was fenced off to, among other things, protect water quality and prevent resettlement by homeless families.

It is remarkable that Navsari Municipality was able to plan and implement a large-scale revitalisation project of such complexity and scope; even after the implementation of decentralisation and urban governance reforms, such projects are usually planned and implemented by state governments for lack of local expertise and staff in small municipalities. The project is one which required not only superior engineering skills (one municipal engineer had earlier served with the Gujarat state government and therefore had the required technical expertise), but also the imagination and managerial capacity to bring together and coordinate the large number of mostly governmental institutions. In a performance assessment of Gujarat's similar-sized municipalities, Navsari Municipality's high ranking is in part due to this project; by 2016/2017, 88% of households were said to have water supply connections that provided four hours of water every day (Center for Water and Sanitation, 2017).<sup>4</sup>

Today, Dudhiya Talav is no doubt the visual heart of Navsari; however, what looks like a clean, beautiful and calm pond lined with trees, boasting a park for senior citizens on its shore and further embellished by ducks swimming on it, is in fact a highly artificial and engineered water body, totally cut

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<sup>3</sup> We were not able to find out how many households were displaced without resettlement or compensation, though about ten houses in the resettlement area were considered by the municipality to be illegal.

<sup>4</sup> Vijalpore Municipality is cited as a poor performer on the same database, with only 52% of households receiving water for two hours a day (Center for Water and Sanitation, 2018). Also, 'water connection' seems to include access to municipal community taps, as data from our own household survey in three selected neighbourhoods of Navsari Municipality suggests that less than 20% had a water tap in their home.

off from its natural dynamic hydrological system. The pond is a lined container for canal water that is not connected to groundwater and does not serve as rain- and storm-water storage. In the past, rainwater from its local catchment area would replenish the pond between June and September and then the pond water would replenish the groundwater over the winter months, until the pond dried out in April and May. As the rainfed pond was fenced off and transformed into a reservoir for drinking water, the previous busy atmosphere, conviviality, and uses such as washing and fishing, have disappeared; however, Dudhiya Talav is also less polluted and is no longer infested with mosquitoes.

### Processes of uncommuning and the commodification of water

At first glance, the case of Dudhiya Talav seems to constitute a typical example of enclosure, state-led dismantling of an urban commons, social exclusion, and marginalisation. Materially fencing off the pond area represents "the most rudimentary and geographically obvious form of enclosure" (Jeffrey et al., 2012: 1250), the more so as slum dwellers were relocated to make way for two small parks and a beautified tree-lined embankment.<sup>5</sup> The pond itself has become off-limits to residents (Figure 2); as one middle class resident explained, "It is [a] no entry area now, so there is a law that I cannot go". The pond also lost its socio-ecological functions of recharging groundwater and of providing an important social and spiritual space in the city. Apart from the slum dwellers, the enclosure affected two communities in particular: professional laundry workers and fishers.

Figure 2. Enclosure of Dudhiya Talav.



Source: Photo A. Zimmer.

<sup>5</sup> Due to the visibility and endurance of trees, their planting can be interpreted as both the material and the symbolic "implanting" of state power on a territory (Meyer, 2018: 104).

According to a former laundry worker, at the time of enclosure in the early 2000s, 70 to 80 professional laundry workers (*dhobis*) from the washing caste had used the pond and its ghats. Over several months, they unsuccessfully protested the enclosure. While a few *dhobis* had the financial capital and the space to invest in washing machines and to modernise their business, most of them had to look for alternative livelihoods, as other ponds were too far from their clientele. The revitalisation of Dudhiya Talav thus contributed to the displacement of these traditional livelihoods.

The fisher (*dhimar*) community, by contrast, had already been through a major socio-economic transformation at the time Dudhiya Talav was enclosed. For most *dhimars* in Navsari, fishing in the ponds and river had already ceased to be their main occupation as fish numbers had declined due to increased industrial pollution; at the same time, new possibilities linked to better education had started opening up for the community. The fisher community nevertheless discussed the matter at the time and, in a letter to the Fisheries Department, demanded that people who depended primarily on fishing for their livelihood should get permission to continue their occupation. The letter remained unanswered, and the few men who were still fishing commercially at the time of enclosure "stayed home [because] they were all old", as one respondent put it.

Furthermore, while the enclosure was probably necessary for the protection of the municipal water supply, it did not serve to produce an urban commons at the higher scale of the municipality; rather, the Dudhiya Talav revitalisation project contributed to the further commodification of drinking water in that the municipality is required to pay a state government agency to receive canal water for the reservoir. An association of organisations supporting local government management summarised the result and impact of the revitalisation project as follows:

The amount of [total dissolved salt] in water has reduced, so has the dependence on groundwater. Many citizens have shut their bore-wells and turned to municipal water connections. This means more revenue for Navsari Municipality. The municipality also plans to raise its water taxes which could add (...) to its income. (Urban Management Centre, 2018)

Although occasional delays in payments to the Irrigation Department would suggest that the Dudhiya Talav revitalisation was not an effective revenue generating vehicle for the municipality, the project contributed to a more centralised, state-led provisioning of water which decoupled Navsari's residents from their groundwater resources and linked them to a large reservoir located in a different watershed about 70 km away.

The narrative of enclosure, state-led uncommuning and marginalisation has nevertheless to be qualified. First, important municipal water supply infrastructure was created for the benefit of a large section of Navsari's population, including the resettled slum inhabitants and the residents continuing to live near Dudhiya Talav; however, in our household survey, both poorer and middle class residents still identified clean drinking water, water scarcity, and water pollution as the three most important local environmental issues.

Second, the land reclamation in the 1960s can be interpreted as a process of both uncommuning (i.e. the municipality grabbing space from *dhobis* and *dhimars* to build their offices and other institutional buildings) and commoning (i.e. poorer residents encroaching and claiming space for their dwellings, though again at the expense of *dhobis* and *dhimars*). While it is relatively easy to identify winners and losers of these processes, the decision of "[w]hose side are you on, whose common interests do you seek to protect...?" (Harvey, 2013: 71) is far from simple for a researcher or policymaker with a social justice motive.

Third, the uncommuning of Dudhiya Talav began well before the revitalisation project, in the form of pollution from the nearby middle class apartment buildings, hospitals, office blocks, and slum dwellings. The pond became an open access dumping site, in particular for wastewater; no (informal) regulations among the different user groups seem to have emerged to protect the waterbody. We were also not able

to find out whether there had been common arrangements to avoid user conflicts prior to the pond filling and the revitalisation (for example between traditional fishers and laundry workers to avoid the smell of fish on laundered clothes), and between those two groups and the worshippers immersing idols in the pond. Regulation of fishing, however, was organised in the past through the caste panchayat (council) of the dhimars and a fee had to be paid to the panchayat to get permission to catch fish. The dhobis also seemed to organise around their caste-specific panchayat through which, for example, their opposition to the enclosure was expressed.

### **Environmental imaginaries of local elites and middle classes**

The transformations of Dudhiya Talav can be understood in the context of the wider urban imaginaries of Navsari's local elites and middle class residents. The former group includes municipal officers, politicians, business leaders, members of prestigious social clubs and professionals, who seem to have strong social ties between them; among the middle class residents are non-resident Indians who spend the winter months here. This imaginary does not involve an attempt to mimic larger Indian cities in, for example, their quest to become world class cities; rather, its aim is to create a 'modern' city. In the 1960s, the pond was imagined as a resource on which to build a 'proper' city with municipal offices, a town hall, hospitals, etc. In the 2000s, the pond became part of a modern drinking water supply paradigm and beautification drive. These developmentalist aspirations are reflected in the assertion by a municipal officer that, "We have developed six lakes in the city. Two are drinking water reservoirs, and for four of them, we have developed water harvesting and beautification".

The above quote also points to the attempt to create engineered 'urban' nature, with clear, singular functions assigned to each waterbody; this is in contrast to the multiple and overlapping uses of Dudhiya Talav and other ponds prior to the 1960s. A middle class resident told us that the pond had been "used the way talavs are used in villages". In his narrative, 'rural' (or village) becomes a code for a specific set of usages and a specific form of nature in the city; this asserts a relationship with the urban pond which is often overlooked or eradicated in cities due to "deeply entrenched conceptual frameworks of urban-rural differences" (Parthasarathy, 2011: 55).<sup>6</sup> 'Urban', on the other hand, stands for a modernist, controlled, re-engineered and 'tamed' nature that has come to dominate the imaginary among Navsari's elites and middle classes.

In this sense, the revitalisation of Dudhiya Talav helped Navsari to create a modern urban image; the pond is the visual heart and aesthetic showpiece of the city, with a photo of it featured on the homepage of the Navsari Municipality website. Local elites were also proud of the beautification of the banks and the creation of a park. As a local government officer commented, "It is (...) beautiful, people can come for morning and evening walks [in the park]". Beautification thus opened up the pond for recreational uses, but with limited access. The park adjacent to the pond is guarded and is open only to senior citizens; the created infrastructure enables quiet, bourgeois, middle class kinds of activities such as walks and duck-watching. A park user confirmed that he likes the peacefulness and the pollution-free environment.

No deeper ecological imaginations (for example, those linked to the various ecosystem functions of ponds) were associated with the beautification; there were no efforts to 'restore' the ponds to their (imagined) pristine state, although an elderly local historian lamented the pond filling of the 1960s, saying to us that, "Mindless people have filled it. They have no sense, no idea about the environment and how to protect it". Yet, environmentally concerned people rarely spoke about the ponds, but rather about river pollution and tree planting; this reflected a longstanding desire for a beautified, 'clean and green' city. Local professionals also told us they had been involved in tree-planting initiatives on the banks of

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<sup>6</sup> Similarly, backwardness became increasingly associated with 'rural' in post-Independence India, replacing its association with indigeneity (the 'natives'). The rural has become a label for "that which was prior and inferior and in need of transformation" (Sharan, 2006: 4910).

Dudhiya Talav already in 1974 and in 1990, their aim being the creation of a more beautiful and 'healthy' environment with reduced air pollution.

Furthermore, hygienist discourses of the 'polluting other' were clearly discernible among Navsari's local elites and middle classes; these related to the slum dwellings and dwellers who were relocated from Dudhiya Talav. A municipal officer, for example, lamented that the environs of a temple and of a community hall built on the former pond could only be developed after resettlement because "backward people were creating nuisance and spoiling the place" and "went for toilet there". Concerning the former slum on the Vijalpore side of the pond, a member of a social club told us that

[t]he slum was on the main road, you could see it every day while crossing [the road]. This was near Dudhiya Talav, the drinking water for the city. The slum dwellers were climbing the fence and going to the lake and polluting it. We saw that quite often. And the road was so dirty. We thought that the area can be very beautiful if the slum is cleared. And the water will not get polluted. This was putting the health of hundreds or thousands of people at risk. The relocation of the entire slum was planned.

The slum relocations helped create a beautified, clean and modern city centre responding to the imagined urban ideals of Navsari's better-off residents, who envisioned it to be more effective to remove the slum dwellers (often referred to as 'these people') rather than to improve facilities in the slums and thus enable less-polluting practices. The association of a particular group of people with 'pollution' – rather than connecting pollution and failing infrastructure – as well as the imaginary of a segregated city, are reflected in this comment by a middle class resident whose home was near the pond:

It was a slum, so people don't have a proper way of living and they make it all dirty. I was against them! It was really a nuisance. People were not good. They used to fight. Now, where they stay, it is the same condition (...). Bad people are staying there; good people are not staying there.

## THANA TALAV: POROUS ENCLOSURE OF A PERI-URBAN POND

### Incomplete socio-ecological transformations to create rainwater harvesting infrastructure

Thana Talav is located in the peri-urban area of Jalalpore. Jalalpore was governed until 1989 as a *gram panchayat* (village council), then as a *nagar panchayat* (town council, a category applied in areas which transition from rural to urban), and a *nagar palika* (municipality); it was finally incorporated into the larger Navsari Municipality in 2006. Before the 1990s, the village pond was used for agricultural irrigation, washing of clothes, and watering and bathing of cows and buffaloes; it also fed a nearby well that was used for drinking water.

In the early 1990s, migrants from Saurashtra came to work in the expanding diamond industry of Navsari and settled in the area. Land around Thana Talav was converted into residences, both planned and unplanned. These constructions disrupted feeder canals from another pond upstream and interfered with drainage – including rainy season flood drainage – from Thana Talav into the Purna River. Furthermore, wastewater started entering the pond, including from leaking sewer lines that had been installed in 1994, and solid waste began accumulating; the pond was also mined for sand and deepened. These changes combined to transform it into a stagnant and polluted waterbody with no flow-through of fresh water. The changes in hydrology and water quality also led to changes in pond use; while commercial fishing continued, in around the year 2000 household and professional washing stopped as the washed clothes began to have a foul smell and even caused skin rashes.

Thana Talav and its shore were the targets of a series of governmental interventions in the 1990s. In that decade, a beautification scheme included the installation of a fountain, recreational boating, the building of a small playground, and the setting up of a few benches. Boating was soon discontinued, however, in part due to the foul smells from the polluted pond, and the playground quickly fell into disrepair. In the 2000s, the nearby sewer lines were repaired, but several attempts to clean the pond

were largely unsuccessful. The construction of a water treatment plant was also discussed but has not yet been realised; ongoing efforts at fish rearing are said to help clean the water.

Since 2006, the pond has been earmarked by Navsari Municipality as a rainwater harvesting structure. In order to help recharge groundwater, it has been dredged and lined with rubber so that water is channelled in such a way as to percolate to a particular aquifer. Its embankments have been strengthened and walls and fences surround most of it, but garbage dumping by neighbouring residents, and allegedly also by the municipal waste collector, has not been stopped. According to municipal officers, 'beautification' is part of this initiative, but this is hardly discernible. Generally, the 'revitalisation' of Thana Talav is far less impressive than that of Dudhiya Talav in the centre of the city.

### **Uncommoning and limited initiatives of recommoning**

Thana Talav appears to be a typical case of a formerly rural waterbody that has deteriorated in the course of urban growth and urbanisation. The village commons was functional until the 1990s; subtractive uses such as fishing and sand mining were regulated by the gram panchayat, which had its own biases but which was probably also responsible for resolving user conflicts. Subsequently, new constructions, an increase in the number of residents, and changing lifestyles have disturbed the formerly dynamic hydrology and have contributed to the pollution of the pond. At the same time, management of the commons has been constrained by the growing social diversity of the neighbouring population and shifting forms of government, although the municipality did not lead the process of uncommoning as was the case with Dudhiya Talav; rather, the municipal enclosure remained porous and increased pollution rendered the pond unusable, particularly for washing. Without staging any protests, private households and professional laundry workers either moved their washing activities to the nearby privately owned, but openly accessible, Mafatlal Mill Talav or upgraded to machine washing.

In the case of fishing, the dismantling of Thana Talav as an urban commons was more deliberate. Since 1994, the pond had been regularly licensed to a private actor for commercial fishing; in fact, over the years the five-year license has repeatedly gone to the same small businessperson, most recently without a proper tendering procedure and allegedly for a price below market value. This improper licensing process led to a confrontation in the municipal council initiated by an opposition politician who was a Muslim; he also accused a local councillor of having illegally caught and privately sold fish from Desai Talav. He narrated to us his conversation with the mayor, who dismissed his case in a council meeting: "I asked: 'Are you also involved in this fish eating business?' We argued and he said 'You are Muslim, you are the one eating non-veg'. I said 'I am Muslim, I do eat fish, but not for free'".

This interchange suggests that the commodification of pond resources has become normalised in peri-urban Navsari and that the imaginary of an urban commons has moved to the background; it also points to undertones of cultural politics related to fish (eating).<sup>7</sup> The commodification processes and property relations, however, were not as clear-cut everywhere, and some angling continued in other ponds. In Alif Nagar Talav, a small group of men told us that they have an 'agreement' with the municipality according to which they have exclusive but informal rights to fishing in the pond in return for cleaning it, which also made the fish tastier; the group also had rules about harvesting times and about investment-linked profit sharing. This type of commoning, however, was limited to only a few types of pond users; for example, no arrangements had been made with women washing in the same pond who were affected by the fishy smell of the laundered clothes.

An example of a privately led beautification initiative further underlines the limited and communal character of commoning practices around Thana Talav. In the early 2000s, a small group of older migrant workers from Saurashtra who lived in a particular housing block and were associated with the same local

<sup>7</sup> Many Gujarati Hindus consider eating fish as impure and fishing has been described by an interviewee from a middle income area as something only "village people, slum area people" practice. See also Parthasarathy (2011) for the cultural adversity of many upper middle class Gujarati Hindus in Mumbai to fishing, fish eating, and fish processing.

temple collected funds to plant trees on the temple land bordering the waterbody. The saplings were provided free of cost by the Forest Department, but there was no other government involvement in the project. These residents, now in their retirement, enjoy sitting in the shade near the pond. This example shows that beautification initiatives are not only led by middle class or elite actors; as also indicated in the course of our participatory photography project in another small town, lower and middle classes can hold a common idea of what is a beautiful cityscape.

There are also emergent commoning practices around the prevention of garbage dumping in Thana Talav; this is occurring particularly on its western shore where middle class housing societies appear to have started functioning like residents welfare associations in larger cities (cf. Harris, 2006) and have become able to control some of the behaviours of their members.<sup>8</sup> These residents, however, lamented that women "from the other side" continued to throw garbage in the pond. This allegation was confirmed by the inhabitants of the eastern side of Thana Talav who seemed to struggle with a lack of social cohesion and community organisation; their housing society had neither president nor caretaker, and, according to a resident, "the men don't have time and are not interested; so nothing happens". Apart from lamenting the lack of community action – which she believed to exist elsewhere – this same woman was frustrated by the inaction of the municipality. She had also tried to personally stop her neighbours from throwing garbage into the pond, but had become increasingly discouraged: "I have stopped talking to people about this, as the ladies used to quarrel with me. They said: 'Is this lake your father's property? If you stay on the top floor, then why do you interfere with things happening on the ground?'"

This quote, particularly the reference to private property, indicates that some residents did not view the pond as a commons; even the idea of the commons as an alternative to private property seems to have been erased from the urban imaginary. Embryonic forms of collective action did seem to have emerged here but often did not last. A local politician found that people would come forward to cooperate in pond-cleansing drives but, in the absence of stern action by the municipality, almost immediately garbage dumping would resume. On the occasion of a festival, neighbours from the eastern side of Thana Talav came together and decided to fine people who littered in and around the pond; an older male resident took the initiative and instructed the women to stop throwing their garbage in the waterbody, causing the situation to at least temporarily improve. However, this type of rulemaking during a traditional gathering also reinforces gendered and gerontocratic power relations.

In general, Thana Talav illustrates that communities around this waterbody are fragmented and that rulemaking is spatially and socially very limited. The pond can hardly be regarded as one urban commons; rather, it appears as if the characteristics and rules of a commons are loosely and variably applied in different sections of the waterbody and its shore.

### **Environmental imaginaries of ordinary residents**

While Thana Talav is not as close to the forefront of the local elites' urban imaginary as Dudhiya Talav is – in part due to its peripheral location – municipal interventions nevertheless reflect the idea of developing ponds with single functions, in particular the improvement of Navsari's drinking water situation; there has been an attempt to transform the pond into rainwater harvesting infrastructure but it was only modestly successful. (The beautification discourse appeared less strong.)

In the meantime, residents of Thana Talav depicted it – as they did other ponds in Navsari – as a space of risk and fear rather than as a resource; they complained about mosquitoes and venomous snakes and recalled incidents of children drowning in the pond. Many find the pond 'scary' and, in accordance with this framing, residents requested the municipality to erect a fence around the pond to protect the population from its dangers. The fence, in this context, is symbolic of an already existing disconnect

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<sup>8</sup> An NGO also protested the illegal waste disposal in this pond but did not form an alliance with members of the housing society.

between the people and the pond, unlike in the case of Dudhiya Talav where the municipality erected a fence to protect the pond from the people and their use of it.

The disconnect between Navsari's residents and its ponds is confirmed by data from our household survey; while 81% of respondents said they lived near a waterbody, only 13% reported that they actually used it, including for recreation purposes. This disconnect has been influenced by both the increased availability of tap water (including for washing clothes) and the pollution of the ponds; for example, a frustrated resident with whom we wanted to speak about the pond, asked: "What pond? What do you want to talk about? It's full of garbage!"

Here, too, discourses of the 'polluting other' are evident, but much less so than around Dudhiya Talav, which is more centrally located. A municipal councillor did mention that migrants from Saurashtra have 'captured' the pond, and a middle class female resident from the less-polluted western bank complained about women living on the opposite side, saying:

There is door-to-door collection of solid waste. But these are dirty women. They don't understand. Some are so lazy, they don't even get up when the waste collector comes. They just take the garbage outside when they go somewhere and then throw it in the lake. On this side, nobody does that.

The class dimension of the 'polluting other' discourse was, in this case, concealed through reference to geographical place (i.e. 'this side' versus 'that side').

## CONCLUSIONS

Enhancing the UPE framework with the concepts of environmental imaginaries and the urban commons allowed for a consideration of the ideational and societal dimensions of the transformation of Navsari's pondscape beyond their changing physicality. The diverse environmental imaginaries of different social groups not only comprised material visions of the city but also ideas about desirable access systems to its resources; they also influenced – alongside other factors such as power, network connections or technical capacity – the changes made to the pondscape and its components. In turn, particular practices of uncommoning and recommoning supported or hindered the realisation of the envisioned urban environments.

Studying urban ponds at the scale of the urban agglomeration, furthermore, enabled us to go beyond identifying the huge diversity of individual pond trajectories, to detecting patterns among the seemingly contradictory socio-ecological transformations in the small city of Navsari. The pondscape (with the exception of a privately owned pond and a largely ignored talav) has been the target of recent government interventions to create drinking water infrastructure; these interventions have taken the form of either changing dynamic waterbodies into water reservoirs or reshaping them as rainwater harvesting structures. Both cases involve the alteration of the hydrological regime from a locally interconnected system dependent on natural rhythms towards a more controlled and engineered environment; in some cases this has included drawing water from distant sources. The revitalisation initiatives have also implied a shift from multiple and overlapping pond uses towards more singular functionalities assigned to individual ponds. While non-subtractive recreational uses such as beautification were encouraged, new enclosures hindered the productive, reproductive and spiritual usages which interfered with the main purpose of the pond; this echoes what others have observed in metropolitan Gujarat and in India overall (Baviskar, 2011; Mathur, 2012; Bose, 2015). However, with perhaps the exception of the central Dudhiya Talav, the desired socio-ecological transformation remained incomplete and the enclosures porous; people retained some access to ponds, though they were often used as dump sites, including by the municipality.

It is probably no coincidence that Navsari's municipal revitalisation and beautification efforts were concentrated on Dudhiya Talav, as the local elites' urban imaginaries were directed foremost at the aesthetics of the city centre. As in large cities in India and elsewhere (cf. Baviskar, 2011), Navsari's elites

viewed beautification as an integral part of creating a proper city, yet without aspiring to become 'world class'. (A common reference point was Surat rather than Singapore.) Neither was beautification in this small conurbation linked to attempts at an ecological 'restoration' of waterbodies that was part of an (imagined) pristine state, as was observed in large Indian cities (see Coelho, 2018). Middle class environmental activism (Mawdsley, 2004) was weak in Navsari and did not focus on urban waterbodies; the discourse on green and blue infrastructure that was elsewhere part of mitigating the effects of climate change seemed not to have reached this small city. For the most part, therefore, the transformed pondscape can be interpreted as building grey infrastructure; Dudhiya Talav reflected Navsari's developmentalist ambitions, which included a modern system of drinking water supply. This seemed justified as the whole of the population was affected by groundwater salinity, but it is also in line with a general narrative of water scarcity in Gujarat (Mehta, 2001) that helps depoliticise the construction of large water infrastructure (Luxion, 2017). Even the more peripheral ponds, such as Thana Talav, can only be partly seen as blue infrastructure due to a narrow focus on enhanced groundwater recharging which has neglected their potential role in flood mitigation and biodiversity; attempts at their beautification, furthermore, have served recreational rather than ecological purposes.

Unlike some authors have suggested (Baviskar, 2011), this research indicates that not only urban middle classes but also lower classes, such as migrant workers from Saurashtra, value beautified spaces in the city. For most ordinary urban dwellers, however, ponds have not been, or no longer are, part of the urban imaginary except as undesirable sites of pollution, nuisance and risk. Middle classes and elites in Navsari have often blamed slum dwellers and poor migrants for the pollution of ponds, similar to what has been reported in the literature on large cities.

These urban and environmental imaginaries have influenced the dismantling of ponds as urban commons; municipal enclosures have sought to protect water quality but also to preserve the image of a modern urban centre that is imbued with 'urban' nature and which is free of commons uses such as washing and fishing. An equally important factor in the abandonment of the commons, however, has been that the pollution of the waterbodies and the augmented municipal supply of piped water have led to a real separation of people from the ponds. Uncommoning in the case of Navsari's ponds was therefore not only practiced by governmental and private/corporate actors, as suggested in much of the urban commons literature (Blomley, 2008; Gidwani and Baviskar, 2011); it also was influenced by the practices of ordinary people. This has been pointed out to be the case in Indian metropolises by, for example, Benjamin (2011) and Sundaresan (2011).

This research, however, has also revealed practices of recommoning, particularly related to community control of littering and garbage dumping. Such initiatives were found to be socially and spatially fragmented and limited; socially diverse populations seem not to have created generalised relations of trust (Huron, 2015) and claim-making around an urban commons seems not to have resulted in the establishment of new communities (cf. Raman, 2011). Housing societies, in some cases, have acted at least temporarily as embryonic communities, though not to the same extent as resident welfare associations in large Indian cities (Harriss, 2006). New inter-group alliances and rulemaking for the restoration of urban commons and waterbodies has not emerged in Navsari as they have in, for example, Bengaluru (cf. Sundaresan, 2011), the reason being that Navsari, as a small city, lacks sufficient institutional 'saturation', not in terms of competition for land (which led to pond fillings and uncommoning) but in the form of civil society groups and environmental activism. This finding challenges Huron's (2015) assertion that 'saturated space' in urban areas constrains commoning. Our research indicates that the creation of (new) urban commons depends on the type of actors and institutions that particular urban areas are saturated with and not with the 'level' of saturation.

Furthermore, our study showed that the pondscape in Navsari did not experience a linear process of dismantlement of the urban commons as suggested in some of the literature on large cities in India (Ramachandraiah and Prasad, 2004; Mariganti, 2011); rather, practices and actors of uncommoning and recommoning coexisted and overlapped in complex ways. For example, the degradation of the urban

commons preceded the enclosure that was part of the creation of municipal drinking water infrastructure; the extent and effectiveness of the exclusion of traditional livelihood and spiritual uses from ponds varied in space; and informal resource-use rules continued or re-emerged in some places. Furthermore, we found no evidence that the creation of commons in small town India (see also Cornea et al., 2016) was associated with resistance to global capitalism or with the search for societal alternatives, as was suggested in some of the literature that is rooted in Western urban experiences (for example, Hardt and Negri, 2009); however, commoning practices as they affect the pondscape are relevant for urban political ecology as they may become a basis for more inclusive and ecological politics at the local level.

Based on these findings we argue that uncommoning cannot be associated only with state, corporate or upper classes (and commoning only with poorer inhabitants). Instead, multiple actors and shifting alliances between and within groups may drive the processes of commoning and uncommoning and thus the realisation of different urban imaginaries. Enclosures and social exclusions are driven by diverse motives; therefore, seemingly simple questions become highly complex, such as who is commoning, who is to gain from enclosure, and whose side are you on (cf. Harvey, 2013).

Building on Ahlers et al. (2014), this study shows more generally that a UPE analysis that pays attention to the diverse environmental imaginaries and (un)commoning practices of multiple actors provides a more nuanced interpretation of the socio-ecological transformation and co-production of the waterscape than what can be captured through the familiar focus on urban elites and the often used concepts of accumulation by dispossession and resistance. Furthermore, looking at the urban imaginaries of smaller cities – that is to say not only at the neoliberal world class imaginary of metropolitan areas – underlines the importance of situated analyses for UPE (cf. Lawhon et al., 2014), not only in terms of a re-centering to the Global South but in terms of a diversification of research to smaller urban settlements.

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