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Dempsey, N. orcid.org/0000-0001-6642-8673, Velarde, C.L.M., Samuel, M. et al. (2 more authors) (2020) From river to Riverfront: how meanings and cultural heritage change. The case of the Sabarmati Riverfront project, Ahmedabad, Gujarat. Town Planning Review, 91 (6). pp. 643-666. ISSN 0041-0020

https://doi.org/10.3828/tpr.2020.89

From river to Riverfront: how meanings and cultural heritage change. The case of the Sabarmati Riverfront project, Ahmedabad, Gujarat
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ACCEPTED VERSION OF MANUSCRIPT.

Introduction

Urbanization in India brings complex changes to landscape ecology and human society (Chaturvedi et al., 2013). It is widely acknowledged that urban rivers play an important and political part in urbanization processes. For example, many post-industrial cities around the world actively redeveloping their waterfronts through commercialization of their canals (Buckman, 2016), harbours and docklands (Marshall, 2001). While this can bring economic benefits for cities (e.g. Mukhopadhyay and Devi, 2017), there is little examination of the implications of such changes to the cultural heritage of urban rivers. We focus this paper on the regeneration of the Sabarmati River in Gujarat. We aim to examine how interpretations of the city's cultural and natural heritage along the river have been used as a catalyst in the policy rhetoric around the Sabarmati Riverfront (RF) Project, how this has been implemented to date and experienced directly by a key set of actors.

The paper will explore how *cultural heritage* – the *tangible*, e.g. historic buildings, river edges and urban nature sites, and the *intangible*, e.g. local identity, knowledge and traditions – are addressed in urban regeneration within the Indian context (after Soini and Birkeland, 2014). We bring together the narratives of different urban actors to explore the impact on cultural heritage of the high-profile and award-winning Riverfront regeneration project – one of the first in India – in Ahmedabad, the largest city in Gujarat. This paper calls on findings from a collaborative international research project which employed a thematic review of existing literature on *meanings* and *uses* of the Indian river. Interviews were conducted with academics and professional practitioners in cultural heritage in the city as well as with city planners and the Sabarmati Riverfront project team. The research team also interviewed groups affected by the changes along the river including residents, slum-dwellers, dhobi-wallahs (who wash clothes for a living) and temple caretakers, as well as users of the regenerated riverfront. The paper firstly outlines academic examinations of the river as cultural heritage within the context of rapid urbanisation in India.

A note on our use of the term *cultural heritage*

UNESCO describes *heritage* as 'our legacy from the past, what we live with today, and what we pass on to future generations' (2020). Guzmán et al. (2017) discuss how this definition how intangible and everyday cultural practices adapt and change over time. It also suggests a cumulative dimension in that cultural heritage does not remain static or untouched by progress – a salient point in urbanizing settings. Aligned with UNESCO's definition of heritage, rivers are a fundamental part of cities – in fact, their existence is often why settlements form there in the first place (Chandran and Gowda, 2014).

In this paper, we consider urban rivers as cultural heritage, made up of both tangible and intangible elements (Rørtveit and Setten, 2015). This follows Soini and Birkeland's description of cultural heritage as closely related to the local spatial context: 'a source of identity connected with a local sense of place' (2014, 216). We note how Pappalardo et al. (2018, 131) describe human/ nature relationships as 'nested' because 'it is not possible to strictly separate the understanding of natural, human and societal dynamics'. We also note Harrison's observation about how memory is addressed in heritage practices: 'one cannot properly form new memories and attach value to them without also selecting some things to forget' (2013, 580). This is a point that we return to later as we explore the approach to the urban change taking place at the Sabarmati Riverfront.

Understandings of cultural heritage in the Indian urbanising context

One can identify two broad themes in writing on rivers in urbanizing India. The first theme is around the long-standing and significant part that rivers play in people's everyday lives in India. Rivers are

associated with traditions and practices including funeral rites (Sinha, 2014) and ancestral, often eco-cultural, knowledge (Rasalato et al., 2010). Pappalardo et al. (2018) highlight how people engaging in these everyday practices have valuable cultural expertise and knowledge. Indian rivers are places of pilgrimage and the waters flowing at points in certain rivers are said to be sacred (Eck, 1996). Rivers are also places for of daily cleaning, clothes washing and providing drinking water for humans and livestock in both rural and urban India. This is linked to the monsoon which Colopy describes as 'perhaps the single most important fact of life' in India (2012, 19). Water – particularly flowing water – has important religious associations in Hinduism (India's principal religion) which is widely practised with daily rituals underpinned by long-standing traditions. Colopy (2012) discusses how flowing river water in India is considered to be self-cleansing – both scientifically, due to oxygenation, and more prevalently, spiritually in terms of its perceived purity as part of religious rituals and a setting for Hindu mythology (Eck, 2012; Dempsey et al., 2018). Rituals include making *puja,* or worship, offerings (e.g. flowers) which are floated in the river, *aarti* (prayers which offer light to deities by floating lit wicks soaked in oil/ ghee) and *daily bathing* (Colopy, 2012). Another cultural practice relates to the immersion of idols and replica tombs in Indian rivers. Sharan (2016) observed this annual practice by Hindu worshippers at the Yamuna River. Such immersions were once conducted using small (hand-sized) clay idols painted with natural colours. These idols have increased in size over time, reflecting changing demonstrations of status, wealth and faith of worshippers; some are now so large that they are set on rafts. The Muslim tradition of Muharram (TNN, 2017) sees worshippers immersing replica tombs in rivers. Other traditions such as pilgrimages are inextricably linked to rivers (Sinha, 2014). The Ganges (or Ganga) is one of India's most sacred rivers with millions of pilgrims (largely but not exclusively Hindu) annually visiting Varanasi and, every twelve years, Allahabad for the *Kumbh Mela* mass pilgrimage (Colopy, 2012).

As riparian urbanisation has developed, many Indians have an 'intense and highly structured relationship with water' (Samant, 2004, 235). The ghat (steps leading down into a river) is an important location for congregations and rituals which is why temples are often located alongside rivers. Many cities including Nasik (*Gadavari River*) and Omkareshvara (*Narmada*) became cities because of the rivers' sacred and spiritual importance. Correa highlighting the myriad of daily activities occurring along the Varanasi ghats:

"the ritualistic bathing of the pilgrims, the cremation of the bodies, the reading of horoscopes by the astrologers, the chanting of the Brahmin priests and the boatloads of tourists clicking away with their cameras…" (Correa, 1991, 99).

Aparna (2007, 79) describes the ghats as 'a physical manifestation of certain social and functional needs of people', the sites of festivals and a 'source of spiritual respite'. This 'intense' relationship with the water relates to the second broad theme around ongoing pressure on water infrastructure. As populations grow, rivers become polluted and unhealthy, receiving significant wastewater from sewage, industrial pollution and runoff adversely affecting water quality (Haldar et al., 2014). Some literature around this theme has examined specific pressures where informal settlements form along river edges as people migrate from rural areas and find an insufficient supply of affordable housing (McHale et al., 2015). Other academics consider how urbanization exacerbates, and is exacerbated by, challenges from climate change such as flooding, drought and associated health risks (Chandran and Gowda, 2014; Haldar et al., 2014).

Other literature spans both themes. Sharan (2016) highlights how the idols immersed in rivers pollute the water as they are increasingly constructed of plaster of paris and chemical-based dyes which pose threats to the rivers' ecology. Colopy describes how 'rivers pour clear and clean out of the mountains, then become sewers in the Gangetic plain' (2012, 27), necessitating the creation of India's National Mission for Clean Ganga. In a pilgrimage site in Gujarat, Soni and Tomas (2013) found problems relating to eutrophication, crematorium waste and widespread water pollution where people wash,

fish and bathe. Sinha's research (2014) along the Yamuna River reported how rapid urbanization and environmental degradation of the river had led to disengagement with its sacred sites. Sinha (2014) describes the river as a place of pilgrimage embodying the link between earth and the heavens, experienced through immersion in the river via the ghats. The ghats have formed part of India's urban cultural heritage for centuries (Correa, 1991; Aparna, 2007), but are increasingly jeopardised by poor maintenance and pollution leading to reduced levels of use by worshippers (Sinha, 2014).

Alley (2002) explored multiple narratives of water-borne diseases in India, one of which was attributed, by her Hindu interviewees, to the individual, his/her immunity and level of faith, and absolutely not the quality of the (sacred) water. This highlights the importance of cultural context and terminology: the term 'pollution' does not permit a distinction between 'purity' and 'cleanliness', which some Hindus instinctively make (Alley, 1998). When reflecting on the extent of pollution in the Yamuna River from solid waste dumping, Colopy (2012) describes how a sense of sacredness has been lost which may be indicative of Sinha's observations of reduced use of the ghats.

Despite this considerable body of knowledge, there is little empirical evidence examining the impact of specific urbanization processes or projects on the relationships Indians have with the river as part of their traditions, everyday practices and heritage (after Rountree, 2012). The research reviewed here suggests that urbanisation poses a threat to cultural heritage (al-Houdalieh and Sauders, 2009; after Arabindoo, 2011) and people's sense of identity (Radoine, 2013). We examine if this is the case for an ongoing regeneration project in Gujarat. To do this, we considered a number of existing conceptual approaches to examine Pappalardo et al.'s 'nested human/nature relationships' (2018, 130).

Methodological approach

Pessoa et al. (2009) describe cultural heritage as a social good and an economic asset, echoed by Guzmán et al. (2017) who consider the economic and social viability that it contributes to a city's development. This stance has become increasingly popular in policy rhetoric and city strategies, which emphasise the economic value of heritage and its contribution to a place's sense of identity (Soini and Birkeland, 2014). Such an approach raises questions around what heritage is selected and retained as cities develop (Wang and Zeng, 2010), as well as how local knowledge and experience is allied (or not) with expert-led and politically driven approaches to urban regeneration (Pappalardo et al., 2018).

With this in mind, we developed an analytical approach examining the *policy rhetoric, project implementation and lived experience* of the changes to the Sabarmati River, with particular focus on cultural heritage (after Dempsey et al., 2016, and Guzmán et al., 2017). This approach permits 'an understanding of landscape that is embodied, practised, experienced and lived in' (Harvey and Waterton, 2015, 905) also calling on Soini and Birkeland's (2014) examination of academic discourse on cultural heritage and *sustainability* (a well-cited term in policy rhetoric). Their examination highlights emergent themes which helped frame our analytical approach: cultural heritage is *temporal*; *sustainable* and preserved for future generations; *economically viable*; and, *diverse* and *specific* to the local context. This also relates to development literature which emphasises *the rights* of those 'living on the margins of society' whose capacity to defend their rights or participate fully in political processes is threatened (Soini and Birkeland, 2014, 218). *Eco-cultural resilience* is where ecological processes are linked with cultural heritage (e.g. local water management), leading to land and natural resource stewardship. This has resonance given the importance of Indian rivers as ecological habitats, sources of drinking water while also being used as dumping grounds for industrial effluents and domestic waste (Haldar et al., 2014). With these themes in mind, we consider the Indian river as important cultural heritage and a spatially bound, temporal landscape with everyday social, environmental and economic benefits and ramifications.

Our empirical research examined the Sabarmati River as an individual case to examine the multiple narratives of this changing urban river over time (after Yin, 2014). We explored *meanings* and *uses* of the Indian river, calling on local writing, painting, poetry, mythology, plays and archival materials about the river, postgraduate theses held at CEPT University and historical maps. We conducted thematic analysis of these existing data, corresponding largely (but not completely) to Soini and Birkeland's themes. Our discussions with research participants centred around place attachment and meaning; everyday activities, including religious (largely Hindu) practices; contestation; and, an overarching theme of change. We then selected a sample of relevant local stakeholders around these themes and who were affected by the regeneration project. We conducted 6 interviews with: academics (2), and practitioners (1 private and 1 NGO) responsible for interpreting, researching and teaching cultural heritage in the city as well as with the designer (1) and planner (1) directly involved in the RF project. These interviews were pertinent to understanding the *policy rhetoric* and *project implementation* aspects under scrutiny. To gauge how the regeneration project had changed meanings held about the river, we also conducted 21 interviews with residents, slum-dwellers, dhobi-wallahs (who wash clothes for a living) and caretakers of Hindu temples located along the river. These 57 interviews gleaned information about the *lived experience* of the project, as did the 30 on-site interviews we conducted with Riverfront users.

From river to Riverfront

A perennial river, the Sabarmati's name comes from Sanskrit meaning 'she who wanders' referring to how it changed its course, year to year. As a city, Ahmedabad developed on the riverbanks in the 1400s with key points in its history inextricably linked to the Sabarmati (Spodek, 2012). The river split the city east-west. Immediately around the western bank, there is a predominantly Hindu and generally more affluent population, and on the east, a lower-income and largely Muslim population. Mahatma Gandhi's ashram is found along the river (western bank), while the *Ravivari* Sunday market is located on the eastern riverbank downstream of the Old City. Shrines and temples are dotted along both sides of the river. Historically, the dry riverbed was a setting for agriculture, light industry (cloth dying and washing at the dhobi ghats) and social events (e.g. visiting circuses and overspill space for *Ravivari*). As the city developed, large-scale slum settlements formed along the riverbanks, which increased domestic pollution, alongside the long-standing significant flow of effluents from nearby industry, into the river (Solanki, 2013).

Ahmedabad Municipal Corporation (AMC) declared a halt to the informal settlements and industrial pollution and in 1997, established the Sabarmati Riverfront Development Corporation Ltd (SRFDCL) with the objective of 'reviving the city by reconnecting it to the river' (Patel, 2015). The Riverfront (RF) project transformed the meandering perennial river to an 11km stretch river channel with a constant water supply by diverting water from the Narmada River (Bhatkal et al., 2015) (Figures 1a-b). The project involved significant land reclamation on the riverbanks and sand dredging from the riverbed (AMC and AUDA, 2006) to create new spaces and move certain land uses (e.g. the dhobi ghats) away from the river intended to be a central axis of the city. Initially, the slum dwellers were to be re-settled in new housing along the river although this, controversially, did not happen (Our Inclusive Ahmedabad, 2010).

The Riverfront is made up of upper and lower linear pedestrian promenades on both sides of the river. These promenades, constructed entirely in concrete, also provide (concrete) seating parallel to the water. Mahadevia and Lathia (2019) found the large vertical gap between two promenades contributed to a sense of unease and insecurity for female users who might not easily escape unwanted attention from male users. Slow-growing neem trees have been planted in shallow tree pits, requiring extensive watering in this semi-arid climate. Figure 2 shows the extent of land earmarked for development along the straightened river, as well as the parallel linear road infrastructure.

<<<<< Figure 1a and 1b >>>>>

<<<<< Figure 2 >>>>>

The regeneration project's aims are 'to provide Ahmedabad with a meaningful waterfront environment along the banks of the Sabarmati River and to redefine an identity of Ahmedabad around the river' (SRFDCL, 2020a). SRFDCL cites three aims, relating to 1. environmental improvement, 2. social infrastructure and 3. sustainable development respectively. SRFDCL claims that these aims can be achieved through 1. reducing erosion and flooding, diverting sewage and retaining and recharging river water; 2. rehabilitating and resettling the riverbed dwellers and activities; and 3. creating parks and public spaces and providing socio-cultural amenities for the city (SRFDCL, 2020a).

Representations of the city and the Sabarmati

Most representations of Ahmedabad are oriented around the river. Philip Baldaeus's 1752 etching from the western bank shows the meandering Sabarmati in front of the city, people working and walking along the river's edge and fishermen sailing downstream. James Forbes (1834), a writer for the British East India Company, etched the Shah Bhaug palace (east bank of the Sabarmati), showing the river in full flow (Figure 3).

<<<<< Figure 3 >>>>>

In 1917, Mahatma Gandhi sited his ashram along the Sabarmati's west bank as the strategic location from which he could spread his non-violent message of Indian independence (Spodek, 2013). The dry riverbed was the starting point of the 1930 Salt March, described by Louis Fischer, an early hagiographer of Gandhi, as 'the most spectacular single event in India's Freedom Movement… Thousands surrounded the village and waited' (in Spodek, 2013, 753).

In the 1960s, photographer Henri Cartier-Bresson recorded 'ordinary people…living their daily lives' (Ray, 1986) capturing evocative images of cloth being washed and dried in the water and on the dry riverbed (Cartier-Bresson, 1966; Figure 4). These images captured some of the different roles the river played in the city's everyday life.

<<<<< Figure 4 >>>>>

The Riverfront Project marks a new 're-'representation of the Sabarmati river. This can be seen in the visualisations used in SRFDCL's publicity and marketing literature illustrating the political rhetoric of the RF project (Figure 5a; SRFDCL, 2020a). The Sabarmati Riverfront project emerged with strong political support with the then Chief (now Prime) Minister, Narendra Modi, fully committed to the "environmental improvement, social upliftment and urban rejuvenation project" (SRFDCL, 2020a). Its course and nature have been changed to fit an engineered conceptualisation of how a river can be controlled (Patel, 2015) and has won national awards (e.g. the Prime Minister's Award for excellence in "Urban Design & Concept"). The project cited the embankments of the Seine (Paris) as inspiration for their design incorporating flood control. The RF design team stated: 'if you're going to withstand the flood that comes here, then you need a hard edge. That is what Paris did… Paris built those big walls and they don't get a big flood anymore' (although Paris did suffer from extensive flooding in 2016 and 2018 after our interviews took place). This hard edge can lead to a lack of physical connectivity between the population and the river as the embankments of Paris (and e.g. London) demonstrate. Interestingly, the Dutch approach of effectively letting the waters flood was not adopted which could have been designed with the Indian tradition of ghats in mind (perhaps also addressing the issues with large vertical gap between the promenades raised by Mahadevia and Lathia (2019)). Cities worldwide are increasingly addressing problems of flooding, pollution and habitat loss by restoring physical contact with the water by deculverting or uncovering rivers which had been buried beneath them as part of the urbanization process (Wild et al., 2011). This general shift away from

Brutalist approaches to development is perhaps indicative of the RF Project's lack of *international* awards.

A study conducted by UMC (2014) found 35 heritage structures along the river, most of which were neglected – perhaps as a result of the displaced slum population no longer being there to maintain them – and without any connection to the new riverfront. Despite being a specific example of visual policy rhetoric in the publicity material (Figures 5a-b), it is currently not possible to access the river directly from the Gandhi ashram because of a tall, locked gate – it was locked during the six months of our study. This lack of connection between the ashram and the Riverfront also applies to the Old City – located very close to the river and recently declared a World Heritage Site. Organised heritage walks in the Old City do not include any reference or visits to the river. This all suggests no formal recognition of the river's contribution to the city's heritage.

<<<<< Figures 5a-b >>>>>

Everyday activities along the Sabarmati

When asked about their memories, older users of the river tended to refer to the time before the riparian slum settlements. When there was water in the riverbed, activities included fishing, swimming, doing aarti and puja, female pilgrimage, idol immersion and cremations. When the riverbed was dry, they remembered cattle grazing, clothes washing/ drying, playing cricket and visiting the circus. Today, riverfront users talked about predominantly social activities including events, idol immersion, boating, meeting friends, puja (without contact with water) and suicide – one unintended consequence of the creation of a standing body of deep water. Physical activities including walking, meditation, yoga and exercise using the promenades and the riverside parks – activities not conducted in the past.

We interviewed 8 workers at the AMC's new Laundry Campus – 7km north of the original dhobi ghat site. Advantages of the original site included easy access to the city due to its central location on the east bank. Women, who dominate the dhobi business, commented how it allowed them to get everyday chores done (such as grocery shopping) while waiting for the washing to dry, being located close to their homes in nearby neighbourhoods. The washing activity itself however was hard and time-consuming and women would have to leave before sunset due to feelings of insecurity and lack of lighting.

The new Laundry Campus provides 'state-of-the-art facilities for the washing community that traditionally used the river banks for laundering' (SRFDCL, 2020a). Our visit to the Laundry Campus largely supports this statement when compared with the original working conditions. Features included washing machines, centrifuges and mangles connected to a piped drainage system with drying areas. Despite the rhetoric that the washing community would be re-housed, not all riparian dhobi-wallahs were given spaces, which were allocated via a lottery for a limited number of spaces. On-site electricity means more flexibility in working hours. Women in particular described how it is safe to work there after dark. The main problem with the new Campus is how its location affects people's everyday routines. Workers live close to the original central dhobi ghat and now have daily travel costs to cover. All interviewees talked about feeling isolated in the campus with no friends, family to visit, places of worship or shopping nearby to maximise time when clothes were drying. Interviewees did not refer to the river itself when discussing their everyday practices, but did describe the Laundry Campus as better, safer and less polluted than the dhobi ghats. The rhetoric has largely been implemented but the everyday social and cultural practices that the location of the original dhobi ghats permitted were highly valued and greatly missed.

Living along the river and the new Riverfront users

The policy rhetoric in relation to the slums was about 'rehabilitation and resettlement of riverbed dwellers and activities' (SRFDCL, 2020a) through 'development on both sides of the riverbank including the development of housing for slum dwellers located along the riverbed' (AMC and AUDA, 2006). Critics highlight the large-scale displacement of around 10,000 riparian slum dwellers which AMC oversaw as part of the land reclamation and regeneration process. AMC's actions have been documented and critiqued extensively elsewhere (Desai, 2012; Mathur, 2012; Mahadevia et al., 2014; Bhatkal et al., 2015), including a Public Hearing (Our Inclusive Ahmedabad, 2010). Our project findings concur with existing evidence that slum dwellers have been left worse off.

We interviewed 6 original slum dwellers, some living for over 50 years in dwellings their grandparents had built. When living there, they used to wash clothes, utensils and bathe their children in the river. Like the dhobi-wallahs, they were very close to the city centre at a few minutes' walk to work. And similarly, they have been relocated to over 7km away from their original homes (Figure 6) resulting in significant problems accessing services and facilities. Interviewees described where they originally lived along the river as safe, cheap and convenient for work and visiting their relatives who lived nearby. Now increased travel costs mean they cannot see these relatives as frequently. There are no school or health facilities nearby nor was any temple or mosque provided within the new housing. Some children are therefore not being schooled. When discussing what they would say to the municipal authority about their current situation, interviewees said: 'take this house and build us a new one near the river', echoing the original policy rhetoric. The interviewees' loss was about their homes and proximity to their means of livelihood and social networks, not the river. One interviewee stated: 'seeing it [the river] everyday only makes me think about how we got evicted'.

When interviewing Riverfront users, older interviewees described the river when the slums were located as an 'undesirable', 'dirty' and 'polluted' area where 'the water used to stink'. Younger users only saw the river from the bridges because it was perceived as inaccessible. Talking about the new riverfront, users all stated that they like to use it, describing it as 'pleasant', 'fresh' and a place where one can 'recharge, refresh and unwind'. Younger users were happy with the 'visual connection with water' while older users enjoyed how 'the atmosphere has been completely changed for the better' and it is 'peaceful and quiet'. This chimes with the rhetoric around creating public spaces for the city. However, we observed few opportunities to linger along the RF given the limited *amenities* (e.g. eateries/ toilets) en route, suggesting that people's visits were probably short in duration.

<<<<< Figure 6 >>>>>

Losing access to the water?

UK team members began the research project assuming the Sabarmati River was considered a spiritual river for three reasons. Firstly, much of the literature about Indian rivers tends to focus on their religious and spiritual connections. Secondly, the ancient Indian texts of the Puranas make reference to the Sabarmati. Finally, we knew that Hindus and Muslims use the river in festivals such as the Ganesha Visarjan (Vtv Gujarati News, 2017) and Muharram to immerse idols or replica tombs respectively. The majority of interviewees challenged this assumption. It was frequently stated that the Sabarmati is not a religiously significant river, but rather it is the Narmada where, for example, people go to practise their last rites. The interviewed academics and practitioners stated that at the time of the monsoon, people (particularly women) would practise puja in the river leaving their floating offerings of flowers etc. because the rains had come: 'it is the rain, the water that is important. Not the Sabarmati'. We did however locate a number of temples on the west bank and, interested to see if the proximity to their river was deliberate, we interviewed 6 caretakers in four temples/ ashrams.

One caretaker discussed the spiritual importance of the Sabarmati because of its historic confluence with the Chandrabhaga (which no longer exists) and Narmada Rivers. This caretaker managed two temples dedicated to Shiva, inside which there is a Shiva linga (the symbol representing Shiva), worshipped using water sourced from the river. A drainage system (to also wash away milk that is also used in rituals) would connect the Shiva linga directly back to the river. As urbanisation has occurred, such water today is piped in and no longer connected to the river. The caretaker described how past flooding led them to move their temple and the shiva linga inland by 50 feet meaning worshippers would no longer go to the riverside.

In another temple, caretakers discussed how the water used to "touch the temple…a part of being in touch with nature and the flow of the river. When it flooded, it used to flood into the compound…. It is a negative thing that natural connection with the river has been lost". They were critical of the RF project, saying: 'the Riverfront may be for the "greater good" but being close to the water is how it is supposed to be so this [RF project] is not very satisfactory'. The RF project's lack of access to the water is demonstrated in Figure 7. There used to be a garden at this temple, and river water used to lap at its steps. During the monsoon, the entire temple would be submerged and the water offered to the shiva linga came from the river itself. The caretaker welcomed "the water [which] used to come up to the temple steps, so would snakes and other animals". The ten-foot high compound wall constructed as part of the RF project blocks all physical and visual contact with the river (Figure 7). The caretaker stated: 'I miss the river – I could see it in the past, but no longer'.

The RF rhetoric describes how ghats are 'designed at strategic locations to enable continuation of cultural activities along the water…and provide access to the water'. We have already shown how these are not always directly accessible (Figures 5a-b), and in addition, we encountered a lot of rubbish and debris, including algae and puja offerings in plastic bags (thrown from the bridges), which would accumulate against these gated stepped ghats. Two RF users described how they felt 'connected to nature', which fulfilled a need to see the water rather than gaining physical access into it.

<<<<< Figure 7 >>>>>

The next sections take these findings around the policy rhetoric, implementation and lived experience and discuss them with particular reference to themes pertinent to Indian riparian cultural heritage.

The Riverfront and economic viability

Pessoa et al. (2009) discuss conceptualisations of cultural heritage as a social good and an economic asset. Our findings concur but only regarding the *policy rhetoric* about what the Sabarmati Riverfront project set out to achieve. The interpretation of *project implementation* is mixed when we asked actors about their *lived experience*. The dhobi-wallahs moving to the Laundry Campus enjoyed significant improvements in working conditions and RF users have a usable site to walk, meet friends although without eateries along the majority of the promenades.

The social benefits of the original dhobi ghat's central location along the river were strongly appreciated by interviewees who lamented the loss of services and family/ social networks nearby. This was echoed by the displaced slum dwellers who have lost access to social and cultural infrastructure – including schools, places of worship and health services. Discussing cultural heritage as a contributor to economic viability raises questions of authenticity around how places are constructed – or here, reconstructed – where few remnants remain of what was there before. The land once occupied by informal settlers and dhobi ghats has been irrevocably changed as a tabula rasa approach was taken to clearing and acquiring land for future (as yet unrealised) urban development and extensive road infrastructure (Figure 2). We found no improvements connecting pedestrians between the river and the Old City in the east of the city (the city gateways are difficult to locate),

suggesting that – for now at least – there is no priority to connect the Riverfront with the existing tangible cultural heritage, including the World Heritage Site of the Old City. This reiterates UMC's (2014) findings about the many neglected heritage structures along the river.

The Riverfront: a loss of diversity and locality?

The Riverfront as a landmark has been *implemented* as a homogenous, culturally unidentifiable feature, for which the project design team called on the embankments of the Seine as inspiration, despite the close vicinity of the Old City and its cultural heritage. Interviewees commenting on the *lived experience* of the Riverfront describe reduced physical and visual access to the river, which for certain temple caretakers was an acutely felt cultural loss, and reiterated in other recent examinations of the Sabarmati project (Dempsey et al., 2018). When discussing public and private access, the RF design team stated that beforehand, "the entire [river's] edge was private more or less. There was no public realm along the river. Some of the biggest critics are those who lost that private edge". There is truth in this. For example, worshippers who weren't slum residents reported how difficult it was to access the water in the past. However, we also found that much of the new public space is currently privately managed and therefore essentially out of bounds. For example, at numerous points along the upper promenade, SRDCL-employed guards monitor users to ensure that no squatters encroach the space. There was a claim in the political rhetoric that the project would rehouse people living in the informal settlements *in situ*. NGO interviewees highlighted that back in 1999 when the first Riverfront plans were drawn up, up to 14% of the Riverfront land was originally earmarked for rehousing, but this was abandoned in favour of the enacted resettlement strategy. This policy rhetoric has not been implemented.

Guards are also employed to keep street vendors off the promenades, preventing them from selling their products. Elsewhere in the city and on side streets perpendicular to the riverfront, street vendors have long made a living along such roads – arguably part of what makes an Indian street (Edensor, 1999). In addition, the high-profile Sabarmati Riverfront Park is entry fee controlled and therefore not public (Dempsey, 2014), and there are large tracts of land earmarked for private development or dedicated to transport infrastructure. There are few opportunities for people to practise everyday aarti along the river's edge – beyond the rare, formalised processions. It is not easy to access the ghats along the river in the same way as one might in Varanasi, for example. All the ghats we encountered had locked gates, making physical access to the water impossible. This obstruction was also clearly experienced by worshippers, as the plastic bags of puja offerings floating on the water demonstrated. A walk along the promenades shows that access to the river is greatly compromised by the infrequent pedestrian stepped entrances and fewer ramps/ lifts to reach the lower promenade. A resident interviewee described these difficulties when attempting to scatter the ashes of a close relative into the Sabarmati. This involved climbing over barriers and some precarious balancing to avoid falling in to the water. This raises questions of who is the public that the RF project serves.

Our analysis shows that interviewees often described the river in relation to the city, which also reflects how the project design team addressed the brief: 'It's a large city project'. Interviewees' comments included: 'rivers make cities more liveable and beautiful', 'the river is an asset of the city' and 'gives identity to my city', providing 'a respite from a monotonous urban life'. However, it was not clear to what extent this was achieved through the RF project when we examine *lived experience*. RF user interviewees talked generally and positively about how the river was unusable before and how the Riverfront project 'has made the river a part of everyday life for all residents'. Other professionals reflected how the design was lacking and should have included: 'the style of architecture that Ahmedabad and its surroundings have'; planting with dense foliage which could 'add a pleasing look to the bare riverfront' and 'more shade'; as well as more varied and dynamic spaces for informal social activities and the accompanying facilities this requires (toilets, eateries, accessible ramps and lifts etc.).

One could argue that the current implementation of the Riverfront project rejects aspects of 'cultural diversity', in removing the messy actors such as the dhobi wallahs and the slum dwellers and, inadvertently or not, has created a set of exclusionary spaces along the river. We are reminded of Pappalardo et al. (2018) here who reiterate the importance of integrating laypeople's everyday experience of where they live with expert knowledge in planning projects such as the Riverfront. Perhaps if this had been recognised in Ahmedabad, the resettlement of slum dwellers might have been more successfully enacted. While the reader should recall that the slum settlements along the river did restrict access to the water for many citizens, the new public spaces have been created through avoidable mismatches between the policy rhetoric and implementation resulting in social injustice for those resettled slum dwellers.

The Riverfront and eco-cultural resilience

Soini and Birkeland (2014) highlight how the human/community–nature relationship is a key theme in the discourse on urban cultural sustainability (e.g. Colopy, 2012). This relationship is seen in the importance of the (seasonal) flowing water of the Sabarmati prior to the Riverfront project. The river is visited by many residents when the monsoon rains came, and some of our interviewees commented on the 'beauty of the dry riverbed' in the past and the positive activities such as seasonal farming, swimming and religious rituals. One interviewee's 'mother-in-law's mother remembers the time when the water you got came from the Sabarmati. And you had to go washing in the Sabarmati. So that was a connection'. Negative aspects of the river were discussed too such as sand-mining, slum settlements and industrial pollution. Some of the academics interviewed called for the restoration of the natural flow of the river, while an NGO interviewee described the river as 'an 11km linear lake'. The RF design team also described it as 'a lake that gets emptied periodically'. Haldar et al. (2014, 2241) examined the water quality of the Sabarmati, which was 'relatively unpolluted' as it reaches the city but 'highly polluted' on leaving the city downstream. Haldar et al. (ibid.) conclude that the 'self-purification capacity of Sabarmati' has reduced significantly due to a 'lack of minimum flow'. The temple interviewees highlighted the removal of natural processes of water reaching the steps of lower-lying temples which brought a sense of cultural loss, suggesting a missed opportunity to integrate local tradition into the redevelopment. We noted earlier how Sinha (2014) highlighted environmental degradation and lack of maintenance as a barrier to the use of rivers for cultural traditions and rites in the rapidly urbanizing Indian city. Birkeland (2008) discusses the importance of the approach taken to reanimating a place for its 'transition to a sustainable future'. With this in mind, we find that the *project implementation* of the Sabarmati Riverfront has created problems similar to those identified by Sinha, and argue that reducing physical and visual access to the river in the *lived experience* has been an important factor in disengagement with the cultural landscape. However, as we have already made clear, the RF project is not yet completed. We will need future research to examine the ensuing development along the Riverfront and how this will affect the human/community–nature relationship over time. Time will show if/ how the design of the project changes what is understood as 'cultural heritage' for Ahmedabad and if the Riverfront, while located alongside it, will continue to be considered disconnected from the Old City.

Reflections on the river in rapidly urbanizing settings

This paper has examined how the policy rhetoric behind the Sabarmati Riverfront project in Ahmedabad was implemented and experienced by a set of directly affected actors. Our analysis of the river as cultural heritage showed a range of discourses around the RF project, in relation to *economic viability*, *diversity and locality* and *eco-cultural resilience*. We felt that these themes corresponded closely to the original RF project's *urban rejuvenation*, *social upliftment* and *environmental improvement* objectives at the policy rhetoric level only. When we examine the project implementation and lived experienced, we conclude that – to date – overall the RF project has detrimentally affected the city's cultural heritage.

Visitors to the city, and users of the Riverfront with time and resources to engage in social and health-related activities, are clearly benefiting from the redeveloped site, being able to access a new riverfront walk. Other actors were less positive about changes to access, specifically how contact with the water has been greatly reduced. The RF project carves out a new linear infrastructure along a straightened rivercourse, rather than integrating into an existing spatial network. The new physical infrastructure seems to come with a code of conduct that would not apply elsewhere in the Indian urban context. Street vendors are not currently permitted on the promenades. Bathing, swimming and accessing the water to, e.g. practise puja offerings, are rendered impossible. No pedestrian connections have been made between the river and the tangible cultural heritage of the Old City, particularly exacerbated by the four-lane wide road between the two.

The Riverfront is without doubt a landmark and a symbol of the city where large-scale city events can take place. But as a setting for everyday life, it does not serve *all* citizens. Exclusion has been made manifest in the spaces along the Riverfront and its linear, monitored promenades – unwelcoming to some. Once a setting for a diverse range of informal individual, collective and citywide social activities all year round, a smaller and more formalised set of social activities are only now possible. To do this, the riverbed has been 'cleaned up' socially and rhetoric claims that access has been improved. This has come at a high price to the informal settlers who were displaced at significant distance from their livelihoods and social networks. The main pedestrian infrastructure consists of long linear promenades, which are prohibitive during the hot part of the day, with little respite from the sun and poor levels of shade, and provide very few habitats for biodiversity. The environment has been improved in terms of cleaner (but still polluted) water and it is not clear how much water is required from elsewhere to keep the river topped up, out of monsoon season.

We conclude that the Riverfront project's aims have not been achieved to date. The Sabarmati was cultural heritage but the Sabarmati Riverfront – in its current state – is not. It is a physical and engineered response to a set of problems which were culturally specific to Ahmedabad. This response does not take into account, for example, local differences in communities, socio-spatial practices and spatial layouts of neighbourhoods but rather applies one treatment along an 11-km stretch of river. The physical changes have led to changes in social and cultural practices, which raise questions about how knowledge, rites and traditions will be retained, adapted or lost.

We recognise the limitations in our short study, e.g. the small number of interviewees. There is potential for longitudinal examinations as the Riverfront land develops, to explore who might be the future beneficiaries (or otherwise) of the project. While this paper makes a clear contribution to examining aspects of *policy rhetoric*, *implementation in practice* and *lived experience*, it cannot provide a full analysis here of a project as complex as the Sabarmati Riverfront. Our findings indicate some ways in which eco-cultural resilience can be compromised through inappropriate land redevelopment, which could be further examined by exploring institutional imaginations of what constitutes 'nature' in Indian cities. Future research could investigate if opening up the riverfront has helped reduce or exacerbate the sense of east-west divide to the city which is explored by other researchers (Pessina, 2019), through socio-spatial explorations of Muslim, Hindu, mixed neighbourhoods, such as the Old City, and their connections to the river.

Our study highlights the need for further research to continue developing our understanding of cultural heritage in urbanising India. The Riverfront in a way introduces a different type of heritage that makes its own statement. We wonder if this reflects what we observed in Ahmedabad as a set of detached cultural heritage artefacts (e.g. the architectural legacy of Le Corbusier, Louis Kahn, Doshi, Gandhi's ashram, the Old City) which are part of the city's heritage as isolated objects rather than integrated within the city as a whole. But it is as yet unclear what type of cultural heritage the Riverfront might constitute. In some quarters, it is discussed as an architectural-engineering object rather than as a landscape element forming an integral part of the city. The RF project predates the

New Urban Agenda, adopted by the UN in 2016. However, future research could consider how lessons learned from Ahmedabad can be applied to new urban river projects to ensure they contribute to cities which protect the environment while supporting economic prosperity, cultural and social well-being (UN, 2020).

To conclude, we revisit Harrison's observation that 'one cannot properly form new memories and attach value to them without also selecting some things to forget' (2013, 580). The Sabarmati Riverfront Project has involved the forgetting of slum dwellers and the original dhobi ghats. While we are not arguing either way that forgetting is right or wrong, there is currently nothing to remember these stakeholders by along the riverfront. Perhaps the tangible heritage of temples and historic artefacts along the river has not been connected to the riverfront because they are a reminder of the slum dwellers and the river that once was. But the historical fabric has not been completely swept away in Ahmedabad, suggesting that memories as well as physical connections can be rekindled. We hope this study provides a warning for other cities looking to implement similar projects of what can happen to India's cultural heritage when a river is irrevocably changed.

Figure Captions

Figures 1a-b. Aerial maps of Ahmedabad, 2000 and 2015. Source: Google maps.

Figure 2. Photograph of the riverfront, taken from the western bank, 2016.

Figure 3. James Forbes (1834) Shah Bhaug, a summer palace built by the Emperor Shah Jahan on the banks of the Sabermatty.

Figure 4. Henri Cartier-Bresson (1966) Ahmedabad, 1966. Drying saris by the river.

Figures 5a-b. Visualisation of the Riverfront at the Gandhi Ashram used in marketing and RF project publicity (SRFDCL, 2020b) and photo (2016) from similar viewpoints showing no actual physical access between the Ashram and Riverfront.

Figure 6. Dwellings at Santoshnagar where informal settlers were relocated from the central Khanpur area.

Figure 7. Hindu temple which used to have visual and physical access to the water at river level. This compound wall now renders this impossible.

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