

NAIROBI UN CONFERENCE, 3RD - 4TH April 2017

MAKING CITIES TOGETHER

PKDAS



MAKING CITIES TOGETHER

Objectives:

**RE-ENVISIONING CITIES
PUBLIC SPACES AS THE BASIS OF CITY PLANNING**

I

RE-ENVISIONING CITIES

1

STITCHING THE FRAGMENTS

2

SHARING LAND & RESOURCES

II

PUBLIC SPACES DESIGN FORMS THE BASIS OF CITY PLANNING

Way Forward:

INCLUSIVENESS

**POPULARISING URBAN PLANNING & DATA
TURNING BACKYARDS INTO PROUD FORECOURTS**

ACCESSIBILITY

**ACTING LOCALLY THINKING GLOBALLY
MAPPING URBAN LANDSCAPES**

INCLUSIVENESS

1

POPULARISING URBAN PLANNING AND DATA

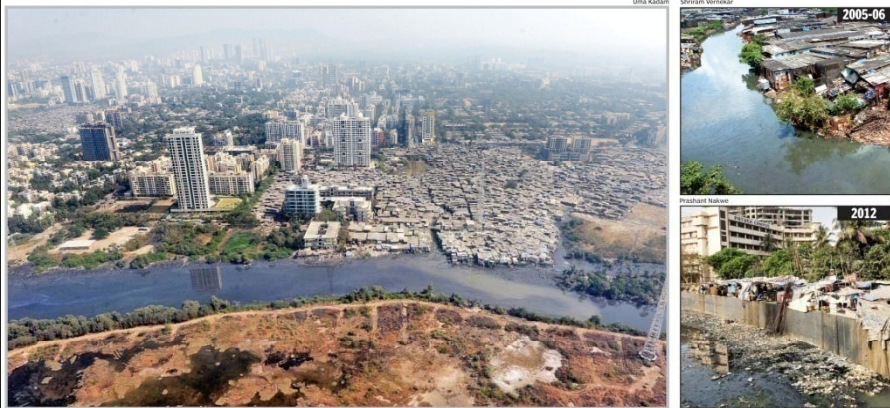
EXHIBITIONS



'Open Mumbai' Exhibition

Mumbai's natural assets include four rivers that, among other functions, serve as natural drains for rainwater. Years of neglect and misuse have narrowed them into stinking nullahs. Is another disaster, like 26/7, waiting to happen?

We need to rescue our rivers now



RIVERS OF SORROW: Slums and garbage proliferate on the banks of the Palar River, while on the opposite bank greenery has been cleared. (Top right) A view from six years ago of how the Mithi was constricted and (right) debris and garbage in the river today at Vakra.

Pronoti Datta | two

The first time most Mumbaiers learnt of the Mithi River was after the floods of July 26, 2005. The city received 944mm of rainfall in 24 hours and in the floods that ensued 94 people died. The Mithi, till then dismissed as a waste-filled nullah that generated a powerful stench from Mahuli to Bandra, Kurla, Kalina and beyond — was noticed because it had overflowed.

Mumbai has not just one, but four rivers, a fact many are unaware of. Besides the Mithi, there are the Dahisar, Palar and Oshiwara rivers, all together 25 km long and covering 13 km in. Like the Mithi, the others too have been dried and narrowed to the width of nullahs by garbage and effluents that for years have been dumped by slums and industries on their banks. Slums themselves encroach onto riverbanks.

As the floods showed, this can have disastrous consequences. The rivers fulfil a vital function in the city's drainage system — discharging excess rainwater into the sea during the monsoon. Clogging the rivers inhibits the flow of water, resulting in floods.

"You have river flow and you have flood plains," says Anshu Dattaraj, a member of Mithi Nadi Samiti, an organisation that serves as a river watchdog. "This is something that is sacrosanct," Dattaraj says that one of the reasons the Mithi flood was so that its catchment area — Powai Hills — was encroached by construction projects.

"Everyone says the Mithi overflowed," Dattaraj says. "It didn't overflow. The water which used to percolate in Powai Hills for around six months rushed down in six hours."

Rivers also sustain ecosystems. The Mithi, for instance, is flanked by mangroves that provide a habitat for a variety of birds, insects and marine life. Along the Mithi is the 7-acre Maharashtra Nature Park. The plot was a garbage dump till the early 1980s. It was turned into a park by the MMRDA, and the Wildlife Foundation took over in 2004.

The nature park, the MMRDA says, is today housing migratory birds, some 260 species of trees and 38 species of butterflies.

"People spend lakhs to go on a day-trip to Kerala to enjoy the backwaters," says Divya Desai, a member of the Observer Research Foundation, which published a report on the Mithi in 2011. "But it could be available right here in Mumbai."

While the Mithi has been the centre of attention since 2006, little is known about the other rivers. All of them originate in the Sagar Gundi National Park. The Palar runs largely through Kurla. The Dahisar begins at Tuli Lake and, after crossing the Western Express Highway, flows through Dahisar (West) before emptying into the Marine Creek. The Oshiwara, like the Palar, ends at Versova Creek. Both rivers run through dense mangrove territory.

A survey carried out by the NOD Conservation Action Trust after the 2005 flood pointed out that the Dahisar and Palar rivers, as well as suburban nullahs, were all treated as drains. Slum colonies and buildings had encroached on the riverbeds. This, as well as the dumping of waste, has severely narrowed the river channels. Laxman Vaidya, chief engineer of the BMC river and drains department, says that both the Dahisar and Palar are currently being treated as drains.

Gauram Kirtane, a member of Observer Research Foundation, says that the author of the organisation's report on the Mithi, says the next step should be to treat the Mithi as a river, not an eastern creek. "It's a disaster in waiting," says Kirtane. "The Mithi and Mahuli were once connected. They shared the same flood plain. The Mahuli has almost been narrowed down in six hours."

TOI Interactive

Rs 790 cr later, Mithi's bitter tale persists

FOUR RIVERS COURSE THROUGH MUMBAI



FLOW CHART

River	Location	Area (sq km)
Mithi	Vihar Lake, Aarey, Kurla, Powai, Saki Naka, Kalina, Vakra, BMC, Dahisar, Mahuli Bay	10.1
Oshiwara	SGMP to Versova Creek	2.8
Dahisar	Tuli Lake to Marine Creek	1.6
Palar	Borivli West	0.6

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15 lakh sq m or 1.5 lakh sq km

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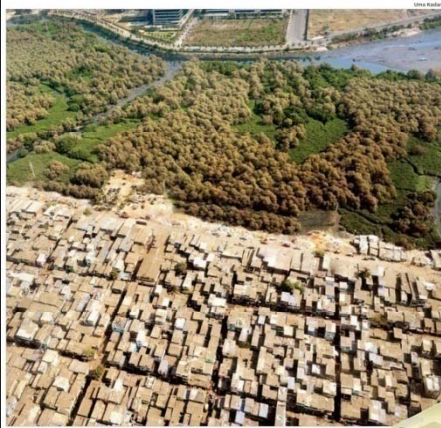
TOI

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Mangroves safeguard Mumbai from erosion and floods. But they fall prey to land-grabbers. A look at efforts to save them

Bigland citizens battle to PROTECT THE MANGROVES



NATURE SQUEEZED: Slums encroach into the mangroves that run alongside the river in Malad-Kandivli that empties into Malad Creek. This absorption zone for rainwater is under threat

Locals go green: Some battles won, others lost

Lokhandwala eco-warriors Residents of Lokhandwala in the city's south have been fighting a two-year battle to save a small patch of mangroves. They turned co-owners by forming the Lokhandwala Lokhandwala Citizens' Association to fight against "illegal" construction. The residents said around 10,000 sq m of mangroves adjacent to the creek had been destroyed by continuous dumping of debris. They alleged this was being done to build a builder's complex at 21-story tower on 7.14 acres of land between the Lokhandwala bridge and Lokhandwala Club. Taking note of the state principal secretary's intervention, instructed the collector, representatives of the forest department and BMC officials to take action against mangrove destruction. "After the order, the builder started clearing the area of equipment. The debris will also be removed and the mangroves restored," said resident Ashish Patil.

Developer made to pay in Dahisar In January 2011 after a two-year battle, the Supreme Court ruled against a developer. The residents, who had already been destroyed, the developer, Ajay Shah, had dumped debris and built houses that blocked sewerage from reaching the mangroves. The court ordered the developer to demolish the houses and pay a penalty. "We went through many problems, but we won the fight. We risked our lives by going into the area to take photos," said Harish Phadnis, one of the forum. "The police didn't support us. They took two weeks to file an FIR."

Facing a trashing in Kanjurmargin Residents of Kanjurmargin in the city's north have been fighting a two-year battle to save a small patch of mangroves. They turned co-owners by forming the Kanjurmargin Kanjurmargin Citizens' Association to fight against "illegal" construction. The residents said around 10,000 sq m of mangroves adjacent to the creek had been destroyed by continuous dumping of debris. They alleged this was being done to build a builder's complex at 21-story tower on 7.14 acres of land between the Kanjurmargin bridge and Kanjurmargin Club. Taking note of the state principal secretary's intervention, instructed the collector, representatives of the forest department and BMC officials to take action against mangrove destruction. "After the order, the builder started clearing the area of equipment. The debris will also be removed and the mangroves restored," said resident Ashish Patil.

Chemi-kul in Goregaon Residents of Goregaon in the city's north have been fighting a two-year battle to save a small patch of mangroves. They turned co-owners by forming the Goregaon Goregaon Citizens' Association to fight against "illegal" construction. The residents said around 10,000 sq m of mangroves adjacent to the creek had been destroyed by continuous dumping of debris. They alleged this was being done to build a builder's complex at 21-story tower on 7.14 acres of land between the Goregaon bridge and Goregaon Club. Taking note of the state principal secretary's intervention, instructed the collector, representatives of the forest department and BMC officials to take action against mangrove destruction. "After the order, the builder started clearing the area of equipment. The debris will also be removed and the mangroves restored," said resident Ashish Patil.

State is always hell-bent on gifting land to builders and doesn't make an exception for mangroves The high court gave a good order in 2005, saying that it was the collective responsibility of the police, forest department, BMC and collector to protect mangroves. This order is misused as each agency points fingers at the other.

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Mangrove Panels The state's forest department can act against mangrove deforestation under the Maharashtra Forest Conservation Act and Environment Protection Act. The Bombay High Court had ordered mangrove destruction in 2005 and banned construction within 50 metres of them.

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MAPPING THE MANGROVES Mangroves are found in various parts of Mumbai. The map shows the distribution of mangroves in the city. The map is divided into three zones: Mangroves, Wetlands, and Encroached Mangroves. The map also shows the location of various creeks and rivers in the city.

Buffering the Coast Mangroves are found in various parts of Mumbai. The map shows the distribution of mangroves in the city. The map is divided into three zones: Mangroves, Wetlands, and Encroached Mangroves. The map also shows the location of various creeks and rivers in the city.

State yet to notify chunk of coast's mangroves The state is always hell-bent on gifting land to builders and doesn't make an exception for mangroves. The high court gave a good order in 2005, saying that it was the collective responsibility of the police, forest department, BMC and collector to protect mangroves. This order is misused as each agency points fingers at the other.

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Developing leisure zones along mangroves & creeks may protect these ecosystems from abuse and increase open spaces

MAUGREVE MAKOVERS COULD SAVE GREENERY

Subash Talsi | via Mumbai is under a lot of stress. The city is blessed with a lot of green spaces and mangroves along its coastline, but the beneficiaries of this bounty—mainly its residents—often do not know how to protect as well as benefit from these fragile ecosystems. On the contrary, these fragile ecosystems are under constant threat from various sources, including urbanisation, industrialisation, and pollution. Mangroves are either cut or they are subject to illegal dumping. Because of the subtle ways in which this ecosystem is being destroyed, it is often not noticed until it is too late.

Exhibit included The Open Mumbai exhibition, which explores ways to expand and link public spaces in the city, will continue at the National Institute of Urban and Environmental Planning (NIUEP) in the city. It was originally expected to end today, April 12.

Malad Creek Revamp Current satellite pic of area around Malad Creek. The revamp project is being implemented by the BMC. The project aims to create a green corridor along the creek, which will be used for recreation and leisure. The project also aims to protect the mangroves and wetlands in the area.

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SHAKING THROUGH: Picturesque mangrove stretches could have boardwalks for viewing, which would also halt the swamp's destruction

CREKS The basic problem for Mumbai's coastal areas is that they are not protected because of dumping and reclamation. If that is stopped and the mangrove habitat is protected, the mangroves would be safe and good property.

Malad Creek Revamp Current satellite pic of area around Malad Creek. The revamp project is being implemented by the BMC. The project aims to create a green corridor along the creek, which will be used for recreation and leisure. The project also aims to protect the mangroves and wetlands in the area.

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POSTER CAMPAIGNS

Juhugiri. Pyar se.

Free open space: add almost 3 Oval maidans
Create 10-km tree-lined, flood-free walkway along Irla nala
Inter-connect open spaces with institutions & amenities
Re-align & integrate Metro rail network with public spaces
Protect beach, improve access, enhance facilities
Provide civic amenities for gaothans, redevelop slums
Form a model for neighbourhood planning,
participation & governance

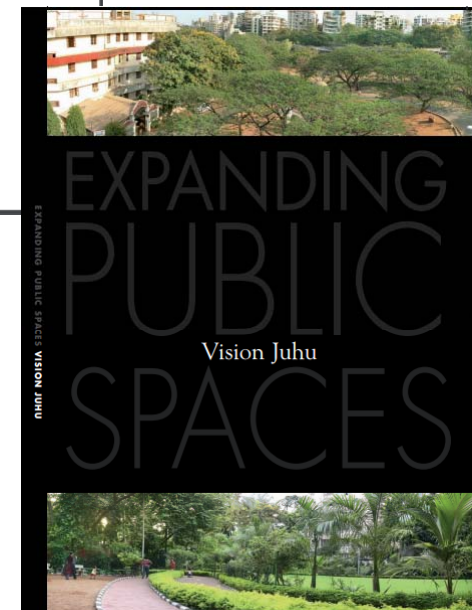
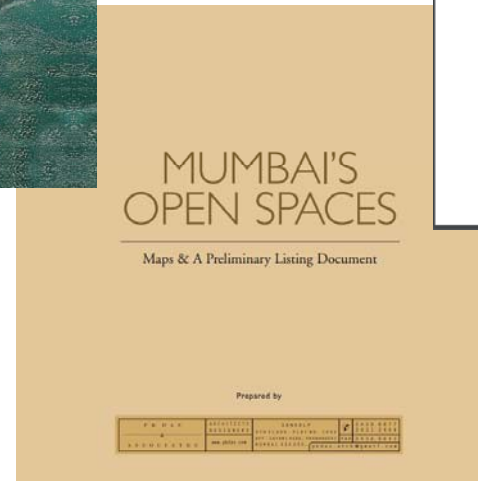
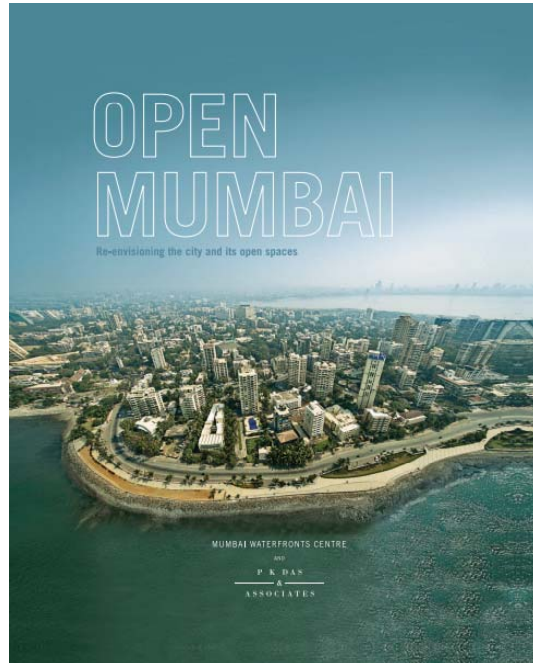
Vision Juhu *Expanding public space*

Kamala Raheja Vidyaniidhi Institute for Architecture • PK Das & Associates, Architects • Mumbai Waterfronts Centre

Research Sponsor: ICICI Prudential
Contacts: anirudh.paul@gmail.com • pkdas.arch@gmail.com • darryldmonte@gmail.com



PUBLICATIONS



INCLUSIVENESS

2

**TURNING BACKYARDS INTO PROUD SOCIAL &
ENVIRONMENTAL FORECOURTS**

IRLAH NULLAH, MUMBAI





Integrating Neighborhoods
Let linear open spaces flow across urban landscapes

KISHORE KUMAR PARK



KISHORE KUMAR PARK



CREEKS AND MANGROVES

CREEKS AND MANGROVES

Mumbai is one of the few cities in the world where over 70 sq km of creeks and mangroves coexist with the city's land mass.

A proven natural barrier against high tides, cyclonic winds and coastal erosion, their environs also represent unused potential for the development of ecologically-sensitive public open spaces.

The city stands to gain approximately 33 kms of boardwalks and promenades in the process.

By creating these spaces alongside ecologically rich creeks and mangroves, we open them to public vigilance and therefore greater protection too.



ACCESSIBILITY

1

ACTING LOCALLY THINKING GLOBALLY



BANDRA BANDSTAND

BEFORE



AFTER



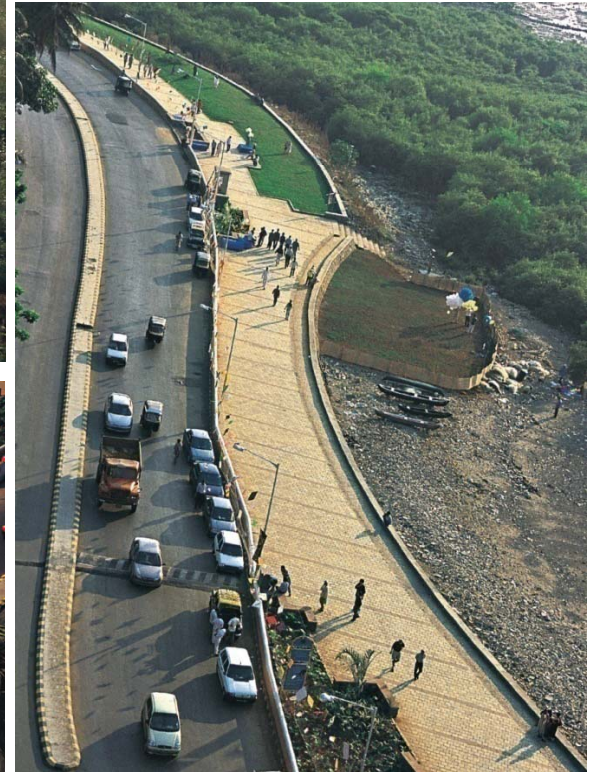
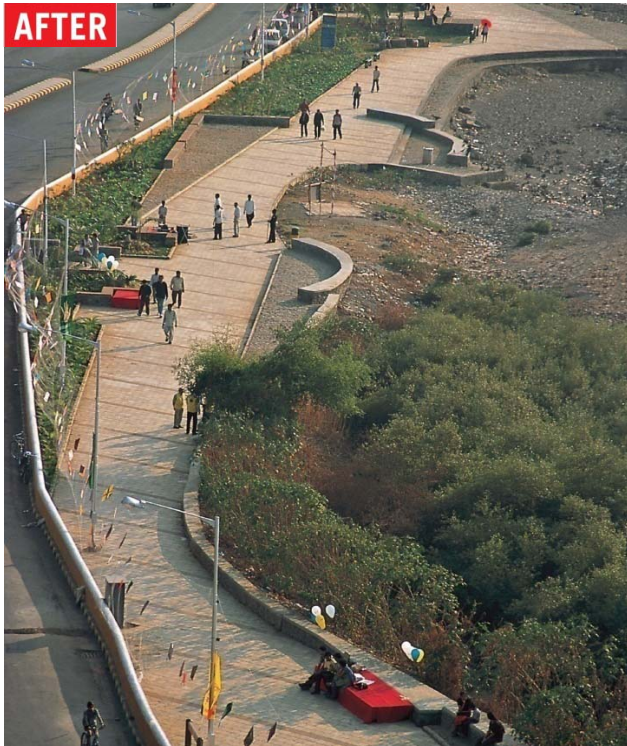
WATERFRONTS
Bandra Bandstand Mumbai

CARTER ROAD, MUMBAI

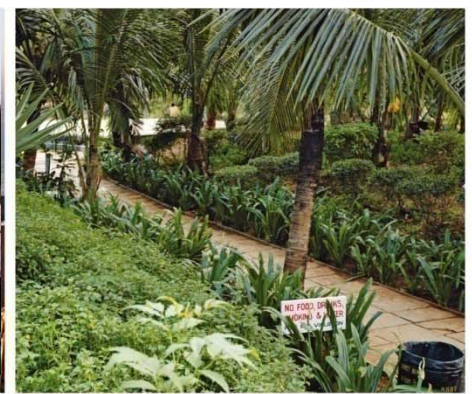
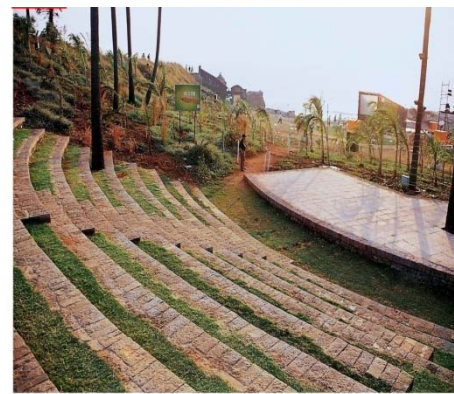
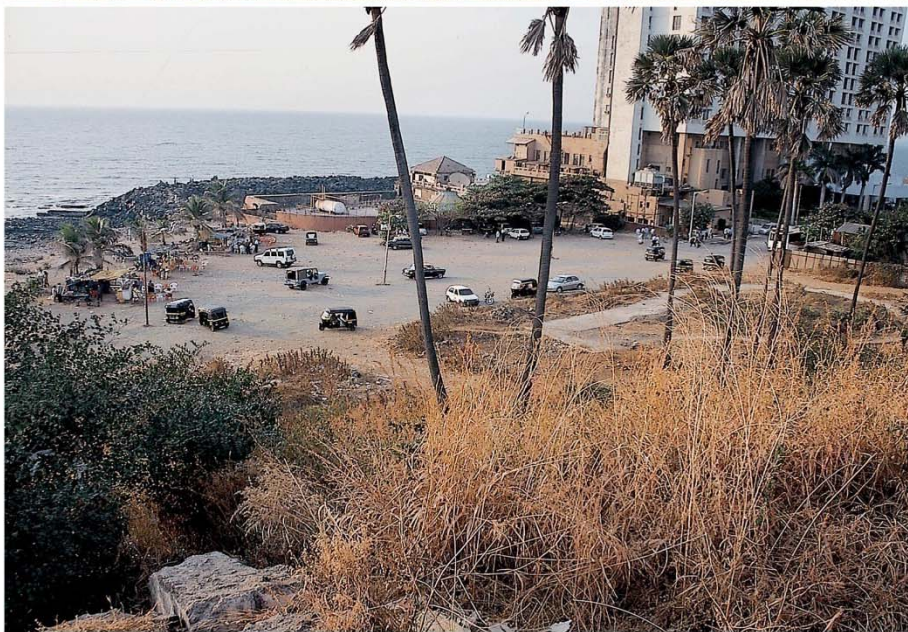
BEFORE



AFTER



BANDRA FORT



HERITAGE PRECINCTS & HILLS
Land's End Mumbai

JUHU BEACH



GATEWAY OF INDIA PLAZA



HISTORICAL SITES
Gateway of India Mumbai

CREEKS AND MANGROVES



MALAD CREEK

BEFORE



AFTER



MANGROVE PARK



PROPOSED PLAN



Proposed Development at Sherman Creek, Manhattan



Mangrove forest in Laem Phak Bia, Ban Laem, Phetchaburi, Thailand



Weedon Island, St. Petersburg, Florida

INTERNATIONAL EXAMPLES

ANDHERI BEACH BOARDWALKS



SEWRI WETLANDS

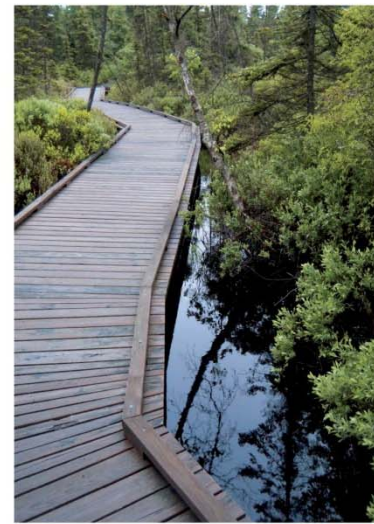
BEFORE



AFTER



INTERNATIONAL EXAMPLES



Dartmouth, Nova Scotia



Boardwalks at Miami



Vermilion County wetland, Illinois

ACCESSIBILITY

2

MAPPING URBAN LANDSCAPES

MAPPING

OPEN SPACES & NATURAL AREAS



Juhugiri. Pyar se.

Free open space: add almost 3 Oval maidans
 Create 10-km tree-lined, flood-free walkway along Irla nala
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DEEPENING DEMOCRACY

Mangroves safeguard Mumbai from erosion and floods. But they fall prey to land-grabbers. A look at efforts to save them

Vigilant citizens battle to PROTECT THE PROTECTORS



NATURE SQUEEZED Downstream into the mangroves that ran along the river in Mahad Road that empties into Matul Creek. This absorption zone for rainwater is under threat

Locals go green: Some battles won, others lost



Lokhandwala eco-warriors
Locals, residents of Lokhandwala, have been fighting a long battle to save the mangroves. They formed an association to form the Lokhandwala Citizens' Association to fight against "illegal" construction. The residents used various means to stop the mangroves from being destroyed by the construction of a new building. They also used the court to stop the construction of a new building. They also used the court to stop the construction of a new building.

Developer made to pay in Dahisar
A developer was made to pay for the destruction of mangroves in Dahisar. The developer was made to pay for the destruction of mangroves in Dahisar. The developer was made to pay for the destruction of mangroves in Dahisar.

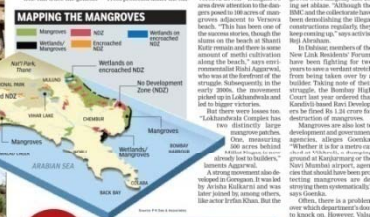
Facing a trashing in Kanjurmarg
A developer was facing a trashing in Kanjurmarg. The developer was facing a trashing in Kanjurmarg. The developer was facing a trashing in Kanjurmarg.

Chemi-kill in Goregaon
A developer was facing a chemi-kill in Goregaon. The developer was facing a chemi-kill in Goregaon. The developer was facing a chemi-kill in Goregaon.

State is always behind on gifting land
The state is always behind on gifting land. The state is always behind on gifting land. The state is always behind on gifting land.

TOBI
TOBI is a group of people who are fighting for the protection of mangroves. TOBI is a group of people who are fighting for the protection of mangroves.

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BUFFERING THE COAST

Location	Area (sq km)
Mumbai Central	10.1
Creek near Mahad East	1.1
Creek at Sevi	4.2
Mumbai Central	4.2
Creek near Chhatrapati	3.7
Creek near Vardoli	2.1
Creek near Mahad	0.7
TOTAL	92.5 sq km or 9.25%

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Mangrove Panels
The state's mangrove department has set up panels for the protection of mangroves. The state's mangrove department has set up panels for the protection of mangroves.

Protected by Law
Mangroves are protected by law. Mangroves are protected by law. Mangroves are protected by law.

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'A CITY IS A COLLABORATIVE ENDEAVOUR'

Open Mumbai: Let's Expand Public Spaces, is a series of vision plans for a cleaner, greener, better planned Mumbai, mounted by architecture firm P. K. Das & Associates and the Mumbai Waterfronts Centre, currently on display at a city gallery. Das, Chairperson of the MWC, tells us what it will mean to you if the plans are ever sanctioned to be translated into reality.

SANJIV NAIR
smdmail@mid-day.com

What inspired the vision plan for Open Mumbai? Let's expand public spaces? How long have you been toying with the idea?
The inspiration comes from the condition of Mumbai. The quality of life is deteriorating, and as the city expands, public space is shrinking. Therefore it is important to have a positive change. We have been working on it for 15 years. Whether it is Bandra Bandstand, Carter Road or any of the numerous other projects which we have been working on, it has been a transformation in the making. During the last one year, these individual efforts have come together. Lessons learnt from various citizen's movements we have been a part of have culminated into this exhibition.

How can the project be executed?
The project has 2 principle parts — Part 1 is about the areas in which the changes have already been

implemented — Juhu Beach, Carter Road, Bandra Bandstand and Gateway of India — and our learnings from these projects. Nearly 50 per cent of the envisioned plan therefore has already been completed. Part 2 of the projects is built on the strength of these learnings. The second phase proposes similar simple ideas that can be executed in other areas. These incorporate projects which are grounded in reality.

What is the fundamental guiding principle for the project?
The basis of the project is conservation, renovation, recycling and replanning. It is important to understand that we are speaking of integrating the project within the existing realities of the city. It is not a mega project, but a combination of small and doable projects. The attempt is to double our open public spaces. We are attempting to create nearly 500 kilometres of green open spaces, which will be utilised as walking and cycling tracks. These spaces will be dotted with gardens and water parks. These spaces will not operate in a silo; they will all be connected to each other, creating a vast network of green open space that extends from Andheri to Chembur; from Mahim to Colaba. It will connect all parts of the city and will facilitate social networking in the real world. The rationale is to have people enjoy and truly identify with the city. It is important to democratise Mumbai's open spaces.

Will large-scale changes need to be made to the layout of the city itself? Will it extend to changes in residential areas as well?
The plan we have put together does not displace. It does not call for major replacement of populations. It just requires small reconfigurations in the plans of certain city pockets. At the exhibition you can see a model of a similar reconfiguration in the Juhu area plan we have proposed. We do not look at projects from a top-down perspective. We look at cities from the bottom-up, where each area plan reflects the identity and need of its residents. Over the years each neighbourhood in Mumbai has developed its own identity. Our aim is to preserve this individuality. Therefore the plan necessitates the need for personalisation of neighbourhoods.

How has the Government responded to your vision?
They have been extremely supportive. Chief Minister Prithviraj Chavan was extremely moved, especially since this was the first time he saw Mumbai the way we see it. Some important bureaucrats were present during the inauguration and he had an immediate discussion with them on how they can take it forward. Uddhav Thackeray has already brought together corporators to take this up with proper plans chalked out, replete with deadlines. So the ball has already started rolling. I am hoping that the support continues.

How long would a project of this magnitude take to get executed? How much will it cost?
The complete budget is Rs 2,500 crore, which for a project of this magnitude is actually quite less. The maximum period for its execution is

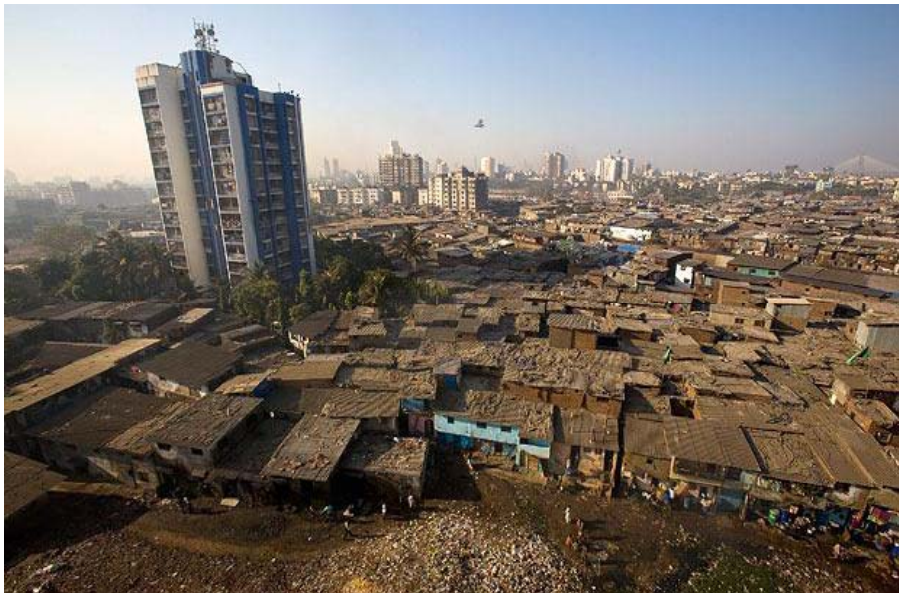
about 10 years. A lot of work which you have done exemplifies a successful marriage of social development and architecture. If this project were sanctioned would it be your greatest challenge and achievement?

(Laughs) I am sure that if we achieve this it would be a great achievement for everybody in Mumbai. But it is important to understand that a city is a collaborative endeavour. No one person can consider anything in his own personal accomplishment. Amartya Sen once said that 'it is public action that influences governments'. And this is an ideology we have worked with for all these years. Bandra Bandstand's redevelopment was a public initiative. It was started with the government's support. Over the last couple of counts, the city's population has dropped from 12.5 crore to 11.8. I hope it is a flash in the pan as I don't want population to drop in Mumbai. I wish for it to stabilise. I would never want to have people leave the city thinking they would be better off elsewhere.

AT: NCMA, Mahatma Gandhi Road, Near Regal Cinema, Fort TILL: Saturday, April 7, Tuesday to Sunday, from 11am to 6pm TICKETS: Indians — Rs10; Foreign Nationals — Rs150; Students/Children — Rs1 CALL: 22881969 LOG ON TO: www.ngmadia.gov.in

THANK YOU





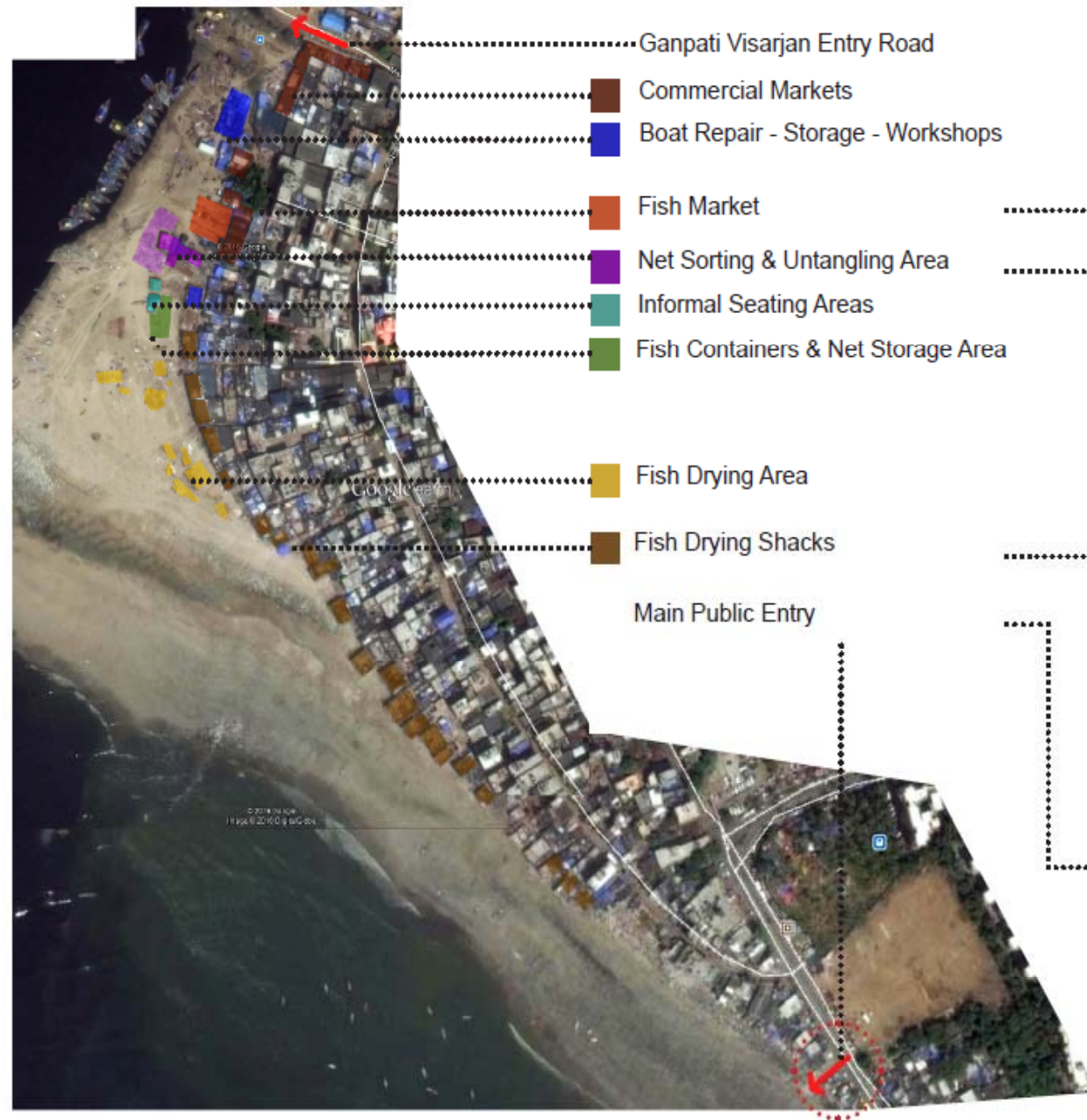


MARGINALISATION AND EXCLUSIVITY
Mumbai

VERSOVA BEACH



VERSOVA BEACH



Ganpati Visarjan Entry Road

Commercial Markets

Boat Repair - Storage - Workshops

Fish Market

Net Sorting & Untangling Area

Informal Seating Areas

Fish Containers & Net Storage Area

Fish Drying Area

Fish Drying Shacks

Main Public Entry



PLAN SHOWING
EXISTING ACTIVITIES

VERSOVA BEACH



MAKING CITIES TOGETHER

