The
Irla nullah
Re-invigoration
Project

Reclaiming and integrating the backyards

A project by
PK Das & Associates, Javed Akhtar, Gulmohar
Area Societies Welfare Group and PUDDI
Mumbai is a city on the water with a vast extent of 140 sq. km. natural assets-- the creeks, rivers, wetlands, beaches, mangroves, hills, forests, that define its geography. Sadly, the city has turned its back to it and considered them as a dumping ground-- both physically and metaphorically- leading to their rampant destruction and degradation.

On the other hand, as Mumbai expands, its open spaces are shrinking, with one of the lowest ratios of open spaces to people-- merely 1.0 sq.mt per person. The democratic ‘space’ that ensures accountability and enables dissent is also shrinking-- very subtly but surely. The city's shrinking open spaces are of course the most visible manifestation as they directly and adversely affect our very quality of life.

Also, daily issues like pollution, congestion and regular flooding incidents leading to human and economic loss have been alarming.

Our objectives include the conservation of these vital natural assets; their integration with neighborhoods and the city; expanding public spaces-- both in physical and democratic terms; expanding tree cover; popularising and de-mystifying the planning process for effective participation; and promoting the idea of neighborhood based city planning.

The Irla Nullah Re-invigoration project will model a paradigm shift in understanding Mumbai’s ecology and build in a sustainable manner with nature and its benefits to the improve with equity the quality of life of all Mumbaikars.
NEIGHBOURHOOD PROJECTS TO A CITY-WIDE MOVEMENT
22 years and continuing

ON THE WATERFRONTS:
RECLAIMING MUMBAI’S OPEN SPACES
A Published Book

WATERFRONTS PROJECTS
- Bandra Bandstand Promenade
- Carter Road Promenade, Bandra
- Land's End Amphitheatre, Bandra
- Juhu Beach Restoration Plan
- Gateway Of India Precinct Refurbishment
- Dadar Prabhadevi Chowpatty
- Versova Beach Development Plan
- Andheri Beach Development Plan

THE IRLA NULLAH RE-INVIGRATION PROJECT:
RECLAIMING AND INTEGRATING THE BACKYARDS
A Book Enclosed

IRLA NULLAH RE-INVIGRATION PROJECT &
RE-INVIGRATION OF MUMBAI’S WATERCOURSES
A STUDY

VISION JUHU:
EXPANDING PUBLIC SPACES
A Published Book

VISION JUHU PLAN
- Development of Public Space
- Irla Nullah Development and Creation of Public Space
- Locating Metro Rail
- Roads Network and One-ways
- Integration of Social Amenities and Institutions
- Improvement of Amenities in Slums & conservation of Goathans

NEIGHBORHOOD BASED CITY PLANNING

RE-ENVISIONING THE CITY:
RE-ENVISIONING THE CITY & ITS OPEN SPACES
A Published Book

OPEN MUMBAI:
RE-ENVISIONING THE CITY’S PUBLIC SPACES

Open Mumbai Plan
Open Mumbai – A Public Exhibition

Plan Elements:
- Sea Fronts
- Beaches
- Rivers
- Creeks & Mangroves
- Wetlands
- Lakes, Ponds & Tanks
- Nullahs
- Parks & Gardens
- Plot & Layout Recreational Garden
- Historic Forts & Precincts
- Hills & Forest
- City Forest
- ‘Open’ People Friendly Railway Stations
- Roads & Pedestrian Avenues
- Area Networking
Reclaiming waterfronts and expanding public spaces movement

Background to the Irla Nullah project

The Vision Juhu Plan

Case for Nullahs and the Irla Precinct

Irla Nullah Re-invigoration Plan
Kaifi Azmi Park
Kishore Kumar Baug
Vijay Tendulkar Rang Manchh
Childrens’ Forest Park
Cleaning of the waters

The Movement in other Neighbourhoods

Bandra Bandstand Promenade
Carter Road Promenade
Land’s End Amphitheatre
Juhu Beach Restoration Project
Gateway of India Precinct Restoration

The Open Mumbai Plan

Publications
While the eastern coast has been put to use for defence and docks, thus restricting public access, the city’s 34-km, western coast has never been considered in the planning and development process.

But, for the millions who live in the crowded city, the waterfronts are the only major open spaces, whether it is Marine Drive, Chowpatty, Haji Ali, Worli Sea Face, Dadar Beach, Bandra Bandstand, Carter Road, Juhu Beach or Versova. The waterfronts are Mumbai’s most significant and popular public spaces.

People from all sections of society, from the city and its suburbs, and tourists flock to these places to relax. Unplanned commercialization has destroyed the natural environment considerably. The absence of a master plan for development of the waterfronts has encouraged the rich and the powerful to manipulate and grab land along the coast, thus gradually depleting the city of its most vital open spaces.

One of Mumbai’s greatest assets is its coastline which forms a series of unique and picturesque waterfronts. Unfortunately, these have become the backyard of the city and degenerated into its biggest dumping ground.

Reclamation, sewage disposal and encroachment have ravaged the waterfronts.

While the eastern coast has been put to use for defence and docks, thus restricting public access, the city’s 34-km, western coast has never been considered in the planning and development process.

RECLAIMING WATERFRONTS AND EXPANDING PUBLIC SPACES
A Movement for Protection of Mumbai’s Seafront

Mumbai Metropolitan Region. Image: Nasa Space Observatory
Our objective is to restore and preserve their natural beauty. We had to offer simple, modest and pragmatic design solutions that work within the existing realities to solve key problems. This, we expect, will generate a momentum for positive change. There can be no grandiose ideas here. In fact, no major construction should be allowed on these waterfronts. Secondly, we propose a selective reallocation of spaces and activities, and thirdly, very minimal restructuring. Most importantly, these waterfronts must remain the collective asset of the city and all its citizens, and a vibrant element in its environmental and social fabric.

In the redeveloped sections, a new relationship between people and public space is emerging. What was, for many years, a filthy backyard to the city and neighbourhood, has now been transformed into a forecourt for social and cultural activity. Neighbourhood citizens’ associations, zealous maintenance activities and social events are all signs of a positive and socially participatory attitude that is emerging slowly. A sense of pride and belonging can be seen in the people who live around these waterfronts and in those who visit.

The idea is to renew social activities at the water’s edge, like the Bandstand in the western suburb of Bandra, where once a band used to play music as people gathered round. New relationships and new ways of addressing public issues may emerge from such gatherings.

We see this movement as not merely a beautification programme, but as part of a larger democratic struggle for reclaiming public space, and to create spaces where people meet, share their experiences and begin to care about each other and garner social relationships.
A BACKGROUND TO THE IRLA NULLAH PROJECT

The nullah is ‘owned’ by the Municipal Corporation of Greater Mumbai (MCGM), which is tasked with ensuring its upkeep and safeguard against encroachments and illegal dumping of waste into the water body. Post the major floods of 2005 that had brought the city to a complete standstill for several days and caused enormous losses to human lives as well as property, a committee was set up to suggest measures to the MCGM in order to prevent such incidents in future.

The committee established that one of the primary reasons was the lack of space for efficient dispersion of water from the land to the sea coupled with high tide, which pushed seawater into the nullahs, accompanied by unprecedented rainfall. The neglect of nullahs had caused major blockages due to which they could not efficiently carry the quantity of water that they were expected to. One of the measures the committee suggested be implemented was to clear and keep 6 meters on either side of every nullah open – in order to allow maintenance vehicles to access these water bodies and ensure their de-silting before monsoons.

The MCGM has since begun the process of severing all illegal sewage lines and connections into the nullahs, creeks and rivers across the city. This is an encouraging step towards cleaning these water bodies and changing the perception common Mumbaikars have towards them.

This buffer area all along the 300 km nullahs of Mumbai, including the Irla nullah, was treated by the city as a dumping ground for disposal of solid and liquid waste and debris. Also, there were large numbers of illegal connections from various properties, including industries, letting their effluent into the nullahs, many of which continue till date. In many locations, including Irla, homeless people built shanties all along the nullah edges, disposing their wastes directly into the water. MCGM under a scheme of providing housing to the Project Affected Persons (PAP) has rehabilitated the slum dwellers along the Irla nullah by giving them 269 sq ft. apartment units in various redevelopment projects in the city.

We do not see this buffer zone as being independent from its surroundings. Therefore the Vision Juhu plan proposes a comprehensive view of the plethora of public spaces, natural areas and their networking.
the vision juhu plan
VISION JUHU - EXPANDING PUBLIC SPACES

Juhu is a residential suburb in the western part of Mumbai, synonymous with glamorous bungalows of movie stars and one that houses one of the most popular public spaces in the city - the iconic Juhu beach.

Vision Juhu has evolved keeping the larger issues of the city in mind. It includes conserving reserved open spaces and creating new ones, pedestrianisation, significant solutions to flooding in Juhu, development of the Irla nullah, improvement in transport infrastructure by skillfully integrating the proposed Metro rail and re-planning traffic flow, opening up of several accesses to the beach, appraisal of social amenities like educational and health facilities and making them accessible to all, improvement in the standard of living in slums and gaothans (urban villages), provision of space and security to hawkers and most importantly- networking this public realm.

The Vision Juhu document is a collaboration between architects PK Das & Associates and the design cell of reputed architecture school KRVIA in Mumbai. This plan and vision therefore is rooted in the ideals of collaboration and participation from its very inception, and takes those ideas forward in implementation with active support and interaction of the citizens of the neighbourhood.

It aims to protect the natural environment and the best features of the built environment, increase commercial viability, encourage tourist and leisure facilities, protect and support communities, create social inclusion, provide people with a voice in landscapes of rapid change and design urban places and spaces for people.
*Juhu-giri:* Taken from a colloquial slang ‘dada-giri’ which means ‘by coercive force’. Here it is re-interpreted as the collective power of the people of Juhu.

*Pyar se:* means ‘With love’

**Juhugirji.**

**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 gaonians, redevelop slums
Form a model for neighbourhood planning, participation & governance

**Vision Juhu**

**Expanding public space**

Kamala Raheja Vidyaniketan Institute for Architecture • PK Das & Associates, Architects • Mumbai Waterfront Centre

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This was a project campaign poster made for response and reaction in public meetings from citizens and local stakeholders. The idea was to popularize the movement and thereby the planning process of such public interest projects in cities.
The Vision Juhu Movement has been rooted in public participation and democratic planning ideals. These clearly manifested themselves when citizens would turn up regularly in large numbers to oppose wrong doings and malpractices when it came to open spaces in their neighbourhood.
the case for nullahs and
the irla precinct
Evolving a Plan for Transformative, City-wide Change

Mumbai has a large network of water channels and water courses that aid the natural storm water drainage in the city. The city authorities are apathetic towards their protection, conservation and integration with the city’s Development Plan. Instead, these assets are merely looked upon to maximize construction and to accommodate real estate interests.

This initiative addresses the abuse and exclusion of over 300 kms of watercourses, that includes four rivers within the city that have been turned into ‘nullahs’ or drains. It brings to light the continuing degradation of the vital 140 sq. km of natural areas of the city -- its mangroves, wetlands, creeks, salt pans, rivers, lakes, beaches, hills and forests.

The Irla Nullah Re-invigoration Plan -- part of a larger citizens’ movement advocating the Juhu Vision Plan that covers an area of 4 sq. km -- focuses on cleaning and turning the waters of a polluted and much-abused natural watercourse backyard and its immediate precinct in the western suburb of Juhu into a vibrant public space and neighborhood fore-court generating rich social, political and environmental dividends since these are the natural storm water drains of the city.

Imagine a scenario where Mumbaikars have easy access to over 600 kilometers of landscaped walking and cycling tracks and open spaces along the watercourses that intermingle and interweave through various parts of the city’s urban fabric?

This is the over-arching vision that has manifested itself in a tangible pilot effort – the Irla Nullah Re-invigoration Project.
The Irla Nullah runs through the western suburb of Juhu with a total length of 7.5 kms. Owing to its geographical footprint, most areas of the neighbourhood have direct access or are in close proximity to this water body.

A host of public institutions and amenities are found adjacent to this nullah. The re-invigoration proposal looks to interconnect these amenities and open spaces to the nullah in order to increase participation and thereby improve vigilance of these public spaces.
Importantly, this movement and the project are a unique example of the need for waging citizens’ struggles for exercising their Right to the City and in scripting its current and future growth and take on several challenges.

Phase 1 of the project includes the development of three citizens’ parks namely the Kishore Kumar baug, Kaifi Azmi Park and the Children’s Forest Park; a public, open air amphitheatre - the Vijay Tendulkar Rang Manch; walking and cycling tracks along the nullah complete with lighting and landscaping, and most importantly the cleaning of the waters in the nullah itself.

These include the conservation of a vital natural asset; its integration with the neighborhood and the city; expanding public spaces – both in physical and democratic terms; popularising and demystifying the planning process for effective participation in conceptualisation and implementation process, primarily effecting a paradigm shift in understanding of sustainable ecology and building with nature and its benefits to the quality of life and environment.
The chain of public parks along Irla Nullah in the form of the Kaifi Azmi Park, Kishore Kumar Baug and the Childrens’ Forest Park form an immaculate ‘city forest’ within a dense urban setting.
KISHORE KUMAR BAUG + VIJAY TENDULKAR RANG MANCH
CHILDRENS' FOREST PARK
Phase 1: Irla Nullah Precinct Plan
1.5 kms of nullah

A plan that networks and integrates the nullah into the
neighbourhood as well as with the multiple amenities
and institutions in the precinct through green streets and
roads that promote a walking culture along the nullah as
well as within the Irla precinct.
CLEANING THE IRLA NULLAH

One of the focal points of the project and one that was key to the success of the re-appropriation and re-invigoration of the nullah itself was the challenge of cleaning the water. It has been mentioned earlier, that these water bodies were originally built as natural and open storm water channels that would take water from inland into the sea. Unfortunately over the years, most of the flow in these water bodies is contributed by illegal sewage and waste water connections from adjacent areas.

There is a tremendous amount of silt that has accumulated over the years on the nullah bed, and the effective cleaning of the water would also entail reducing this bio-waste silt from the bed itself in order to reduce the foul smell and odour of the water too.

The design team has worked closely with the National Environmental Engineering Research Institute (NEERI) to develop a system for cleaning the water. This system comprises of several elements that include 1) a floating matter filtration gate, 2) silt trap beds, 3) compact treatment units and 4) floating beds of phytotidal plants.
the movement in other neighbourhoods
With over 149 kms of coastline, Mumbai is a city on the sea. Yet how much of this coastline is respected, preserved and used as planned public space? The promenades at Bandstand and Carter Road in Bandra demonstrate how neighbourhood initiatives, inclusive ‘non-elitist’ planning and government and private support can transform our seafronts meaningfully.
BANDRA BANDSTAND PROMENADE

A product of a strong citizen’s movement in the area, this promenade meanders along the water’s edge of Bandra creating a contiguous open space where people can walk, relax and experience the vast beauty of the seascape.

Project undertaken by Bandra Bandstand Residents’ Trust in association with social activist and actor Shabana Azmi, and architect P.K. Das.

Funding: Shabana Azmi (MPLAD Fund)
Water front length: 1.2 km
Cost: Rs. 140 lacs.
Period of construction: 2001-02.
Structures and restoration: Arup Sarbadhikary
CARTER ROAD PROMENADE, BANDRA

This project too was part of the larger movement in the city to reclaim public spaces and to protect Mumbai’s coastline. The development at the Carter Road seafront regenerated the mangroves, hitherto abused as a dumping ground, and their lush greenery has greatly added to the beauty of the waterfront. The mangroves formed the central point of interest at the Carter Road seafront. Our development meanders around it. Patches of grass, planned adjacent to the mangroves, extend the lush green expanse.

Project undertaken by Bandra West Residents’ Association with social activist and actor Shabana Azmi, and architect P.K. Das.

Funding: Shabana Azmi (MPLAD Fund)
Waterfront length: 1.25 km
Cost: Rs.150 lacs.
Period of construction: 2001-02.
LAND’S END AMPHITHEATRE, BANDRA

The project includes restoration of the hill slope and its contours, which had been dug up mindlessly by a hotel to create a garden that has no relevance to the immediate natural and historical environment. The project includes plans to conserve, restore and develop appropriately the existing ruins and to regenerate the palm forest that once stretched over its slopes.

Project under taken by Bandra Bandra Bandstand Residents’ Trust with social activist and actor Shabana Azmi, and architect P.K. Das.

Funding: Shabana Azmi (MPLAD Fund)
Area: 18,000 sq.ft.
Cost: Rs.90 lacs.
Period of construction: 2002-03
Restoration of Juhu Beach is the third project in this movement to restore Mumbai’s waterfrotns. It is one of Mumbai’s most largely visited public spaces. It is a place to unwind, relax and take in the sea air. Unfortunately, ad hoc, unplanned commercialization, without a cohesive and comprehensive vision, had destroyed its natural environment considerably.

Our proposal covered the entire length of the main beach and promenade from the koliwada (fishing village) of Khar at the southern tip to Moragaon at the northern end - a length of nearly three kilometres.

As the plan shows, it covers the whole spectrum of activities along the stretch, both on and off the beach and its immediate surroundings. The already existing stalls and podia have been incorporated into the plan. Its salient features include proposals to reduce traffic congestion, generate substantial new parking spaces, pedestrian crossings and islands.

The plan also addresses the access points to the beach and focusses on integration of this natural asset with the communities living along the beach. After a long struggle over 10 years, which included several court cases against owners of the stalls on the beach, the plan was approved by the High Court and the plan was implemented with tremendous support of the local area citizens.
The Gateway of India, located in south Mumbai is a historic monument looming majestically against the backdrop of the Arabian Sea. A must-see on every tourist’s itinerary and a favourite waterfront of the locals, this public space is visited daily by thousands of people. But sadly this plaza, one of the largest of all the waterfronts in the city, was a clutter of disparate structures and unplanned activities with no cohesive design holding them together.

Our redesigned precinct both extends the plaza and relocates the activities at the farther end, re-organized to skirt the rear end of the central garden. This gives the historic monument a breathing space in front and provides the visitors a panoramic view of the monument, the sea and the other landmark structures and statues around. The plan also organizes the commercial and other activities at one location and ensures that they do not encroach on the plaza and clutter it.

Project under taken by Municipal Corporation of Greater Mumbai along with support from architect PK Das & Associates and INTACH: Greater Mumbai Chapter.

Area: 1,20,000 sq.ft.
Cost: Rs. 450 lacs.
Period of construction: 2007-09
the open mumbai exhibition
Re-envisioning the city and its open spaces

Image from the Open Mumbai exhibition held at the NGMA in 2012
Mapping of Mumbai’s Natural Assets and Open spaces

As Mumbai expands, its open spaces are shrinking. The democratic ‘space’ that ensures accountability and enables dissent is also shrinking, very subtly but surely. The city’s shrinking physical open spaces are of course the most visible manifestation as they adversely affect our quality of life. Open spaces must clearly be the foundation of city planning. An ‘Open Mumbai’ ensures our physical and democratic well-being. Unfortunately, over the years, open spaces have become ‘leftovers’ or residual spaces after construction potential has been exploited.

Key Objectives of the Open Mumbai Plan:
1. Expand and network public open spaces.
2. Conserve natural assets & protect eco-sensitive borders.
3. Prepare a comprehensive waterfronts plan.
4. Establish walking and cycling tracks.
5. Promote social, cultural and recreational opportunities.
6. Evolve and facilitate participatory governance practices.
8. Undertake necessary amendments in the DP and DCR.

Through this plan, we hope to generate dialogue between people, government, professionals … and within movements working for social, cultural and environmental change. It is a plan that redefines land use and development, placing people and community life at the centre of planning — not real estate and construction potential.

A plan that redefines the ‘notion’ of open spaces to go beyond gardens and recreational grounds — to include the vast, diverse natural assets of the city, including rivers, nullahs, creeks, lakes, ponds, mangroves, wetlands, beaches & the incredible seafronts.
A plan that aims to create non-barricaded, non-exclusive, non-elitist spaces that provides access to all our citizens for leisure. A plan that ensures open space is not only available but is geographically and culturally integral to neighbourhoods and a participatory community life.

A plan that we hope will be the beginning of a dialogue to create a truly representative ‘Peoples’ Plan’ for the city.
Initiatives such as the Irla Nullah Re-invigoration project amongst many others address these larger issues of city planning and people’s active participation in key decisions concerning their daily quality of life along with the protection, restoration and improvement of the natural assets that keep the important ecological balance of our cities intact, so we can move forward in a more responsible and sustainable mode of development.
VARIOUS PUBLICATIONS RELATED TO THE MOVEMENT FOR RECLAIMING PUBLIC SPACES IN MUMBAI

These publications have been outcomes of the effort to popularise and publicise the on going struggle and movement for the right to public spaces within the city of Mumbai and the re-invigoration and integration with the city of the 140 sq. km. natural areas.

1. Vision Juhu - Expanding Public Spaces,
   Published by PK Das & Associates, 2007
   In collaboration with the design cell of Kamla Raheja Vidyanidhi College of Architecture and Environmental Studies, KRVIA.
   This book is based on an extensive survey and documentation of Juhu the coastal suburb of Mumbai. It includes mapping of the open spaces, the iconic Juhu beach, the Irla nullah, mangroves, along with a survey of the various activities and settlements, proposing a comprehensive and all encompassing Vision Juhu Plan with neighborhood based city planning as its main argument.

2. On the Waterfront - Reclaiming Mumbai’s Open Spaces,
   Published by PK Das & Associates and Mumbai Waterfronts Center, 2011
   Through two actual case studies, the book demonstrates how the two waterfronts in Bandra--another coastal suburban neighborhood in Mumbai, have been reclaimed for its citizens and by design have been turned into democratic spaces.

3. Mumbai’s Open Spaces - Maps & a Preliminary Listing Document,
   Published by Mumbai Waterfronts Center and PK Das & Associates, 2011
   This is a comprehensive listing with the locations and areas of all the reserved open spaces as per the Development Plan of Mumbai, ward-wise has been published. This listing also records the actual available open space on the ground and their user status.

4. Open Mumbai - Re-envisioning the city and its open spaces,
   Published by Mumbai Waterfronts Center and PK Das & Associates, 2012
   This is the first time ever a mapping of the open spaces in Mumbai and the vast extent of the natural areas-- creeks, wetlands, rivers, watercourses, hills, forests, beaches, have been undertaken. The book also provides examples of the various projects undertaken through citizens effort in reclaiming the waterfronts and open spaces in the city. Also, an Open Mumbai plan has been presented illustrating the idea of the networking and integration of all the open spaces and the natural areas with an objective of achieving a sustainable future.

5. Design Beyond Boundaries- Integrating the backyards,
   Published by PUDDI, 2018
   A four month design studio with final year students at KRVIA focussed on backyards of development that the city produces with its growth, and how these spaces needed integration and improvement. The Irla Nullah was the protagonist of the studio with students exploring various avenues through which its improvement can be envisioned at a larger neighbourhood scale.

* These publications can be found online on PK Das & Associates’ website: www.pkdas.com
a continuing movement..