

I am indeed honored by your invitation to deliver the second Global talk at TU Delft. I thank Professor Dirk Gameraan for suggesting my name for this prestigious talk. Also, I would like to thank Professor Roel Kamerling— Programme Manager Global Initiative. Sophie Oostelbos along with Esther L. Bruining-Fransen for coordinating this program.

Introduction: Need for collective Intervention:

Slide 02



To call my talk Global is embarrassing for me, for I have been all along a Mumbai local. Ever since I came to study architecture in the year 1972, the city has been my workshop and a place that has profoundly shaped my thoughts and ideas about people and places.

Slide 03 – Nullah Protest



If there is one thing that I have to state as being the most important learning from my living and working in Mumbai, it is the need for collective intervention in the current trend of exclusionary urban development with an objective of achieving social and environmental equity and justice for all. Also, as a necessary condition, each individual intervention would have to be linked to other democratic rights struggles, thereby building networks of interventions towards evolving an alternate vision of the city.

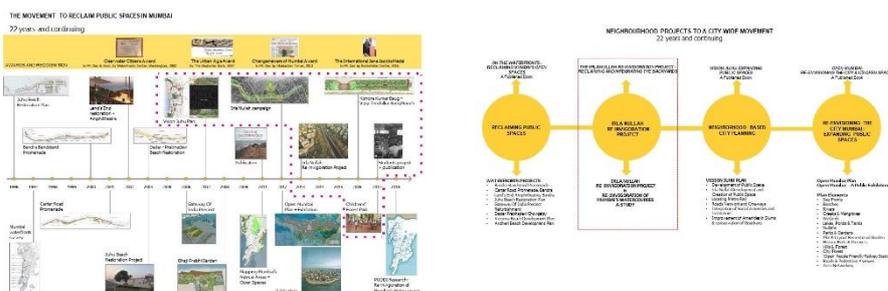
It is with this objective that I consider building relationships collectively between people and with nature, as an important mission. This is the essence of my talk: focused on an understanding of these relationships and networks of interactions, particularly those that develop in the process of collective interventions by citizens on demands pertaining to social and environmental justice and how they contribute to the larger interest of sustainability of cities.

I would like to view cities from social and environmental perspective and understand how the two together constitute a necessary condition, and their persuasion, a means for the achievement of a higher state of urbanization of the city. The two are inextricably entwined and neither is exclusive. Thus, a sustainable ecology of cities is possible when we can successfully combine environmental and socio-economic dimensions equally in the plans and actions that we pursue. As a matter of fact, it is the extent of their integration and inclusion that form a criterion by which we evaluate the value of our work and engagements.

For an understanding of collective interventions and ecological scrutiny, I will get on to discussing one significant citizens' struggle-- the Irla Nullah Movement, as an example. While this example is specific to a Mumbai neighborhood, the issues they raise will, hopefully, resonate in the experiences that you have in your respective places of familiarity, particularly those in the global south—South America, Africa and South Asia. The overarching ideas and principles would hopefully be the same, thus invoking a dialogue and solidarity amongst us.

But, before I get on to the Irla example, I would like to present 'A Network of Movements-- 22 years and continuing', that provide a historical perspective to the Irla movement and its position in the larger context of the city.

Slides: 04 & 05 – A Network of Movements



These various projects that are born out of citizens' movements in which I have participated are limited to public housing, open spaces and environment. It is the constant and deliberate erosion of public spaces, the denial of access to housing to vast numbers of people and the rampant destruction of natural areas and the environment, that have compelled me to engage with these issues.

Very often we find ourselves absorbed into zones of comfort and complacency, engaging in issues and places that have developed or achieved exclusivity, but to get out and engage with situations of instability and discomfort, dealing with the invisible yet perceived barriers across city landscapes, and their unification, is indeed challenging.

Slides: 06 & 07 – floods, garbage in mangroves etc.



After all, what can be more equal between nations, influenced by neo-liberal globalisation, than the question of land mis-utilisation, exclusionary city planning and deplorable state of the environment in which vast numbers of people are discriminated and subject to climate change risk. It is for these reasons, that the local struggles of the marginalised and discriminated people across borders & nation states, for equality and sustainability, are indeed global, in their essence and spirit.

As these conflicts begin to dominate the city landscape, we are compelled to intervene, particularly in the excluded, discriminated and much abused backyards of people & places that are, in most instances, situated in the borders, edges, peripheries and margins. The Irla nullah and its immediate precinct is one such area to which we, in Mumbai, have turned our back.

Slides: 08



The Irla Nullah Re-Invigoration Movement:

In the year 2013 the citizens of Juhu, a neighborhood in the western suburbs of Mumbai, launched the Irla Nullah movement for the conservation, re- invigoration and re-integration of a 7.5km “nullah”. Most of the over 300km of nullahs in Mumbai, that includes the Irla nullah, were originally natural watercourses, or rivers connected to the sea and thereby the tides. These

watercourses regulated ground water level and assisted in dispersing flood water from the land in case of intense rain.

Unfortunately, over the years they have been abused -- becoming waste and sewage drains, which take the effluents out into the sea. Sadly, the city government has channelized them by building impervious concrete walls along their edges, thus further severing their ecological and environmental attributes, and separating them from the people.

At the time when the Irla nullah re-invigoration movement was launched, the Municipal authorities wondered why this was important. Also, the people living in Mumbai, generally associate nullahs with dirt, filth and odour. Over the years there is little public knowledge of them being rivers and natural watercourses that defined the landscape. Battling such impediments, the movement continued: comprehensive plans and implementation programmes were created through active citizen participation.

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Meetings were held in public places with posters – Juhugiri Pyar Se (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”) and a ‘Vision Juhu’ book publication, communicating the project.

The city officials could no longer ignore the gathered momentum: the Municipal Commissioner finally approved the project 11 months later. Today, people, in large numbers, flock the redeveloped areas along the nullah.

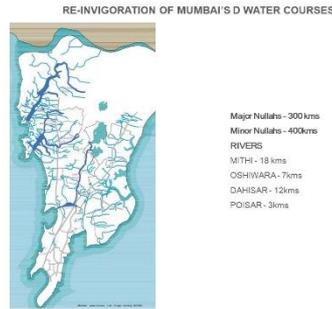
The Irla Nullah Re-invigoration Plan -- advocating the Juhu Vision Plan that covers an area of 4 sq. km, focuses on cleaning and turning the waters of a polluted and much-abused natural watercourse and its immediate precinct

into a vibrant public space and a neighbourhood fore-court generating rich social, political and environmental dividends.

Although the neighbourhood contains some open spaces, they are idiosyncratic, disconnected, and some are not open to the public. They are disparate in nature and function in isolation. But, the nullah itself physically weaves through the entire neighbourhood as, potentially, a linear park, connecting various disparate spaces. Such networking of spaces realized the high networking potential of the social fabrics of different communities — fisher folk, slum dwellers, hawkers, and all other classes.

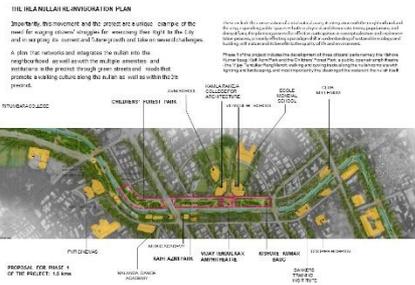
What we are deeply concerned about, is the constant division of our cities into disparate fragments; both in social and spatial terms. Polarisation of people and communities in terms of their religion, race, caste, class, faith, gender, nationality ... is leading to social instability and tension. Indeed, our cities are producing and reproducing backyards of exclusion, discrimination, hatred, neglect and abuse; even natural habitats are being systematically destroyed leading to increasing levels of social intolerance and climate catastrophe, thus undermining the very idea of cities and their sustainability.

Slides: 10 – 16



The Irla Nullah runs through the western suburb of Aftab with a total length of 7.5 kms. Due to its geographical features, 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-investigation proposed looks to interconnect these amenities and open spaces to the nullah in order to increase participation and thereby improve vibrancy of these public spaces.



The Vision Juhu Movement has been rooted in public participation and democratic planning ideals.

Juhu residents fight for access to playground

Residents who fight over entry to open ground



Importantly, through the Irla Nullah movement, we could generate an active and pulsating system of public spaces, including the nullah that would form the spine of Juhu.

I will now get on to six important ideas that the Irla Nullah project evokes, from an activist's perspective;

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1. EVOLVING A PLAN FOR TRANSFORMATIVE, CITYWIDE CHANGE
2. NEIGHBORHOOD BASED CITY PLANNING
3. COLLECTIVE MAPPING & OPEN DATA
4. INFLUENCING THE DEVELOPMENT PLAN (DP) OF THE CITY
5. URBAN PLANNING AND DESIGN AS A RIGHTS
6. ECOLOGY, ENVIRONMENT & POLITICAL MOVEMENTS

The Irla movement 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. Sadly the city, like other many cities, has turned its back to this vast extent of the natural areas and considered them as a dumping ground-- both physically and metaphorically- leading to their rampant destruction and degradation.

For long, our discourses on cities have relied on the understanding of social relationships and how the modes of production have influenced their formation. To support this statement, I would like to refer to David Harvey when he quotes from Karl Marx in his book - Social Justice and the City. "The totality of these relationship of production constitutes the economic structure of society, the real foundation, on which arises a legal and political superstructure and to which correspond definite forms of social consciousness. The mode of production of material life, conditions the general process of social, political and intellectual life.

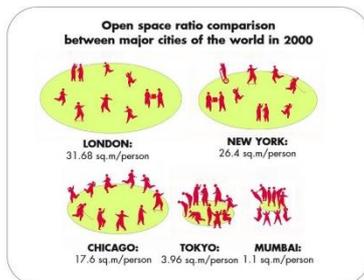
"In terms of Marxist terminology, the urban and the process of urbanization are simple superstructures of the mode of production (capitalist or socialist)".

Further, in the same book, Harvey has analysed social relations, built form and environment; and how each influences the other, but his reference to environment is restricted to built-environment and does not include the natural ecosystems. I quote— "Urbanism may be regarded as a particular form or patterning of the social process. This process unfolds in a spatially structured environment created by man. The city can, therefore, be regarded as a tangible, built-environment- an environment which is a social product."

Interestingly, Pickett, Cadenasso and McGrath in their book – 'Resilience in Ecology and Urban Design', quoting McGranahan and Satterthwaite present a wider understanding of the environment. I quote — "a great deal of the urban sustainability literature tends to promote the so-called "brown agenda" of environmentalism, which emphasizes the need to solve immediate needs of the billions of people who live in degraded, unsanitary conditions and grueling poverty, while the "green agenda" emphasizes protection and enhancement of ecosystems to support future generations and other species. Reconciling green with brown agenda issues, however, is at the heart of more encompassing viewpoints on sustainability, recognizing that poverty and environment conservation are inextricably entwined (McGranahan and Satterthwaite 2002)" Such reconciliation is indeed, the essence of the Irla movement.

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.

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This phenomenon is realized in many world cities, more critically experienced in the cities of developing nations. While cities are expanding, public spaces are rapidly shrinking, in both physical and democratic terms. The democratic 'space' that ensures accountability and enables dissent is also shrinking-- very subtly but surely. This means space for wider public participation and dialogue are shrinking. It is in these prevailing conditions that we are compelled to pursue the idea of public spaces as being the foundation of city planning. Public spaces ensure physical, social and democratic well-being of all. The city's shrinking open spaces are of course the most visible manifestation as they directly and adversely affect our very quality of life.

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Another objective of such movements ought to be the conservation of the vital natural assets and their integration with neighbourhoods 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 neighbourhood-based city planning. The Irla Nullah Re-invigoration project models a paradigm shift in understanding Mumbai's ecology and build in a sustainable manner with nature and its benefits, to improve with equity the quality of life of all Mumbaikars.

Building new Relationships:

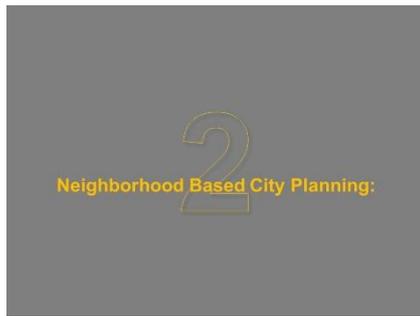
In the redeveloped sections of the Irla nullah, a new relationship between people and public space that includes the nullah waters, is emerging. What was, for many years, a filthy backyard to the city and the neighbourhood, has now been transformed into a forecourt for social and cultural activity. A sense of pride and belonging can be seen in the people who live around these waterfronts and in those, who visit. Such emerging relationships are particularly significant at a time when there is a huge deficit of relationships that are based on the question of sustainable ecology; the environment in particular.

Such movements are not to be seen merely as 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 collectively between them and nature. It is such relationships that cannot be separated from one another and considered exclusive. "Rather, together they, form the urban ecosystem. The two together are inextricably both human and biophysical" Pickett, Cadenasso and McGrath.

It is in this context, I consider our struggles to pursue the idea of unification of cities through architectural and design endeavors as being important; while engaging closely with social and environmental movements. Our priority has to be to establish close relationship between architecture and people, placing strong emphasis on participatory planning from the very beginning and at every stage.

With the nullah and the public spaces being the main planning criteria, we hope to bring about, over period of time, social change: promoting collective culture and rooting out alienation and false sense of individual gratification, promoted by the "market". Unjust social systems are inherently unsustainable. The linear parks created along the nullahs will create more liveable neighbourhoods for more people, in an equitable way. This equitable expression of nature-based solutions is sustainable.

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(2) Neighborhood Based City Planning:

The Irla project is a demonstration of the importance of neighbourhood based planning and designs for the preparation of the city's development plans and projects. Such an approach facilitates local people's active participation in matters concerning their area, which they know the best, while influencing the city's planning and development decisions.

Through a neighbourhood-based development approach it is possible to decentralize and localize projects: thus breaking away from monolithic planning and design ideas that are disconnected from most people (and often serve the interests of the few, not the many). 'Master Plans' for cities are generally top-down models, drafted by elite groups of designers, and fail to engage with citizens on their ideas.

With localised projects, the planning of cities will hopefully become a bottom-up process with participation of all people. Importantly, neighbourhood-scale work is a more collaborative approach to the city and place-making. For citizens, such projects allow the immediate reclamation, redesign and re-programming of public spaces within their localities.

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The chain of public spaces along the Nullah in the form of the Salt Area Park, Victoria Square, Durgam and the Dakshin Front Park forms an irremovable 'city forest' within a dense urban setting.



(3) Collective Mapping and Open Data:

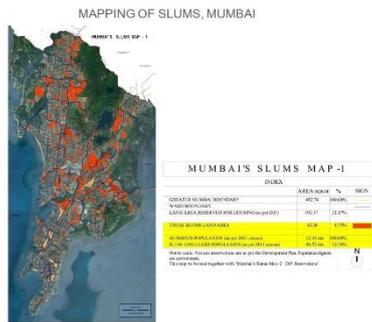
It is with an idea of achieving unification and sustainability of urban landscapes that Open Mumbai plan was prepared by the Mumbai Waterfronts Centre and architects P.K.Das & Associates, beginning with mapping Mumbai's landscape. A sustained campaign around the data obtained from mapping, published in a book titled – Open Mumbai, has succeeded in many ways. The current Development Plan-2034 for Mumbai has, for the first time, recognized the natural areas covering a vast stretch of over 140 km², which constitutes 30 percent of the area of the city.

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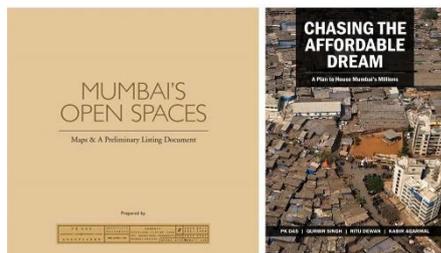
These natural areas are now integrated into the overall idea of open spaces for the city, as proposed in the Open Mumbai Plan. More importantly, placing the natural areas in the public spaces domain will, slowly but surely, lead to people realizing the significance of these assets in their daily life experiences around their own neighbourhoods and the city. Such an outcome is already evident in the ongoing Irla nullah re-invigoration project.

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In order to intervene with an objective of achieving unification of the divided urban landscape, mapping would be a good start. The process of mapping is an effective means for mobilizing participation. Promoting open data and organizing public dialogue are key tenets of democracy. Mapping is a significant political act as it opens new doors to socio-political understanding and valuation of the various resources—natural and man-made—while exposing and challenging the deep nexus between the various adverse forces that has, over the years, severed the various links and relationships.

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A collective mapping process is also necessary in order to challenge the information and data that is meted out regularly by governments and their various agencies, which as we know, in many instances is propagandist and not necessarily in the wider public interest. Such a process would also mandate wider public dialogue into historical evidences and studies, while evolving alternate plans for now and the future.

“Maps are an insight into a Nation’s progress. Not maps that define National boundaries, but maps that define cities and neighbourhoods. Maps that reveal the resources we may have lost or colonized, Maps that make us vigilant and protective. Effort must be made to continually map the city in extensive detail.... if we are to build a more equitable city for its citizens” --Open Mumbai book.

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(4) Influencing the Development Plan (DP) of the City:

To add misery to such alarming scale of social and environmental crisis, neo-liberalization and privatization that many countries across the world, including India, have committed to pursue, have added further fuel to the fire and that is destabilising cities. In India for example, federal and various state governments have withdrawn from undertaking social welfare projects, particularly education, health and housing that they committed to, upon independence in 1947.

But, since the year of liberalisation in 1991, governments consider their role as facilitators to private agencies and are committed to market led development mantra. This mantra has, clearly, not worked. Public resources, including natural assets, are increasingly colonised for maximising private profit: rather undermining larger public good.

The current mind set of planning of cities has to be challenged. Sustainable ecology and environment has to be the central aspect of city development plans, prepared with people’s participation. Our mission is to facilitate the rejuvenation and integration of open spaces, the natural areas and the wider city.

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(5) Urban Planning and Design - A Right:

Planning and architecture are an effective democratic tool of social change and instrument for mobilizing collective movements. Cities are not spaces for competition: nor for individual and disparate efforts. To me they are a fantastic opportunity for forging collective and co-operative effort. Larger public participation and engagement of people's organizations in the development process truly helps develop a city: and planning and architecture should integrate with it for enabling social changes and achieving development justice.

For me, it is urban planning and design that provides incredible power for the achievement of the objective of unification of people, places and nature. It is for this reason I have been arguing that participation in urban planning and design need to be considered a right, and that, popularization and democratization of the same is, indeed, important.

We can plan cities taking into account existing land occupation patterns, particularly slums and informal sectors and the many more backyards of abuse and discrimination rather than cause displacements and or neglect them, due to the imposition of land use plans that are based on skewed planning standards and vested political interests. We must re-envision our cities on the basis of unification of the disparate parts and the dismantling of the many walls that have been built over the years. Achieving contiguity through un-barricading spaces will enable the building of self-supporting structures of harmony and resilience. Natural areas and assets too, must form an integral aspect of city's planning and design programs.

Unfortunately, movements concerning planning and design matters have not evolved adequately to influence change towards unification of the fragmented

landscapes and the achievement of sustainable urban ecology. Planning and design knowledge is considered to be technical and the domain of qualified architects and planners. This exclusivity of knowledge coupled with the distance that the fraternity of architects, planners, engineers and other technocrats have maintained from people and their struggles, is making this task even more difficult. Such separation has also not let the fraternity think of new ideas in theory and practice for understanding the enormous potential that planning and design exercises have in mobilizing people to participate and through that, popularize knowledge, evolve new languages of communication.

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Importantly, the Irla nullah plan and movement demonstrate that such ideas relating to the expansion of public spaces could not have been envisioned by formal master planning process.

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Popularizing Urban Planning & Design:

Popularisation of ideas and knowledge is a big and complex process since they are rooted in social and political ideologies and objectives. As we experience, participation is based on race, gender, religion, faith; and class prejudice and relationships. Similarly, production of data too is rooted in these various forms of social division. Plans and proposals that are mooted by Governments reflect the preferences of the dominant group. Public dialogue is invariably a dialogue of such groups. Law courts too have, in many instances, considered the views

of the dominant groups as public opinion and have gone to the extent of ruling in their favour: thereby strengthening the hands of divisive trends and forces that deter unification and sustainability. Such political and social conditions pose significant challenges to progressive and liberal movements. Evolving effective tactics through interventions and strategy—a vision for the city, in the building of urban movements and the democratization of urban ecology are significant challenges that we have to deal with constantly.

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(6) Ecology, Environment and Political Movements:

The global discussion surrounding developing sustainable cities for the future is centred to environmental protection, upgradation and integration. Quite naturally –natural environments need to be re-invigorated to mitigate the harm done to them through mindless construction. For the Irla movement, rejuvenating and re-invigorating nullahs becomes a point of entry into dealing with the larger issue of safeguarding and integrating our natural areas.

Through initiatives like the Irla Nullah Project, we aim to bring these natural assets to the forefront in order to protect them. Facilitating the right of way for these streams to function efficiently, including ensuring space for their swell, will allow citizens to understand the role they play in the larger ecological scheme of the city. These nature-based solutions in the form of a restored ecosystems are inherently sustainable, much than the grey solutions currently in place.

The struggle for unification of the broken pieces of urban ecology is a political battle that has to be pursued through democratic struggles.

“Public action can play a central role in economic development and in bringing social opportunities within the reach of the people as a whole. What the

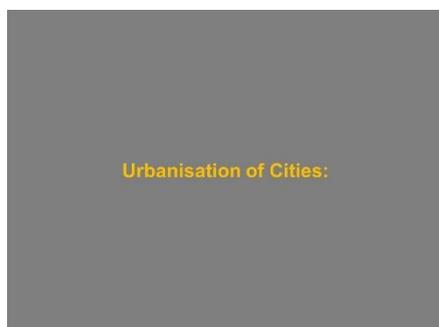
government ends up doing can be deeply influenced by the pressures that are put on the government by the public” (Sen and Drez, 1989:38)

What we require for the achievement of sustainable cities is a citizen-based and knowledge-driven movement for repairing and re-unifying the fragmented and dysfunctional urban landscapes. But under the prevailing trend of urbanization that is pursued by government, with its thrust on privatization of common assets and development works, the agents of change relentlessly devise new ways of damaging and breaking down the landscape into disparate and often conflicting fragments to achieve business turnover and profit. My view is that our counter struggles to repair & unify our fragmented and dysfunctional urban landscapes will succeed only when they are turned into significant political movements.

Our mission to re-connect the broken urban landscape must not be given up, in spite of the many despair and frustration that we face. Our undeterred commitment towards building sustainable cities compels us to keep raising these concerns, in opposition to the mighty forces that are causing enormous damage to natural assets under the guise of enabling developmental work for prosperity. But prosperity, as we know, privileges fewer and fewer people while marginalizing the vast majority. In this process, more and more people are alienated from participating in decisions that impact the nature of their cities and its future, thereby weakening the alternate political movements and popularization of sustainability politics. To challenge this ongoing dominant trend is indeed our reason for strategizing and pursuing interventions, such as the Irla movement.

CONCLUSION:

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Urbanisation of Cities:

I would like to end with a critical view that I have on the question of urbanization and cities. Considering the current growth trend, I am compelled to consider the building of cities and urbanization as independent processes, even though city building is an incredible means for the achievement of the objectives of urbanization; in spite of the fact, that the two are inextricably connected.

As I understand, urbanisation is a process that promotes human development in a sustainable environment and provides opportunity for liberation from oppression, subjugation, discrimination and ensures access to various human development opportunities – housing, health care, education..... Therefore, villages could provide urban conditions of life and living. Are cities ensuring the safeguarding of these rights?

The exclusion of more and more people from the benefits of development, across cities, is squarely a failure of the current growth pattern, which are steadfastly undermining the very idea of cities. Tragically, cities are being rapidly divided into disparate fragments of exclusive communities and marginalized populations. Our failure to ensure this basic human right to a vast majority of city population exposes our failure, while challenging our collective capacity and capabilities.

Struggles for sustainable ecology achievement is essentially a democratic rights' struggle. Movements and struggles for sharing and democratising public spaces and resources are effective democratic means for the achievement of equal and just cities. Participatory development plans and programs are a necessary tenet of democracy. It is a struggle not just for individual gain but also for building collective power. These are the values upon which the Irla movement is based.

In my introduction and in the popularizing planning section, I said planning and design are incredible democratic tools of social and environmental change. However, this tool is best utilized for the transformation of space. It is the transformation of space that significantly affects individual and collective relationship.

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“How can we radically alter the prevailing notions about the production of space? “How can we build cities or “something” that replaces what was formerly the City? How can we reconceptualize the urban phenomenon? “- Henry Lefebvre- The Urban Revolution.

The ongoing process of “separation and segregation break the relationship between people and nature. They constitute a totalitarian order, whose strategic goal is to break down concrete totality, to break the urban. Segregation complicates and destroys complexity – a necessary sustainability criteria”- Lefebvre

It is in this context that participation in urban planning and design with social and environmental outreach ought to be considered a right. The democratization of planning and design would be a significant step towards the urbanisation of cities. An urbanisation that would be firmly rooted in the idea of sustainable ecology and its achievement.

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This presentation has been possible due to the active support of late Darryl D'Monte – an eminent environmental Journalist & activist and Samarth Das – Architect and Urban Designer.

These ideas and works referred to be by no means my individual work but born out of a collective and co-operative struggle for dignity and rights.

Collaboration & transparency are indeed a high point of this project. Multiple stakeholder's collaboration includes the residents of Juhu, particularly the Gulmohar Area Residents Association, Javed Akhtar, Member of Parliament, who also provided funds under the MPLAD fund, for this project and Ameet Satam, Member of Legislative Assembly. The Mumbai Municipal Corporation, National Environmental Engineering Research Institute, KRVI – a neighborhood-based college of architecture, PUDDI -Participatory Urban Design & Development initiative, various elected representatives & Architects - PK Das & Associates.

Thank you all for your patient hearing.

Reference books:

1. S.T.A. Pickett, M.L.C Cadenasso, Brian McGrath
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2. Henri Lefebvre Translated by Robert Bononno
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4. David Harvey
'Social Justice and The City'
5. P.K. Das
'Open Mumbai'
6. David Maddox & P.K. Das
'Nature of Cities blog'