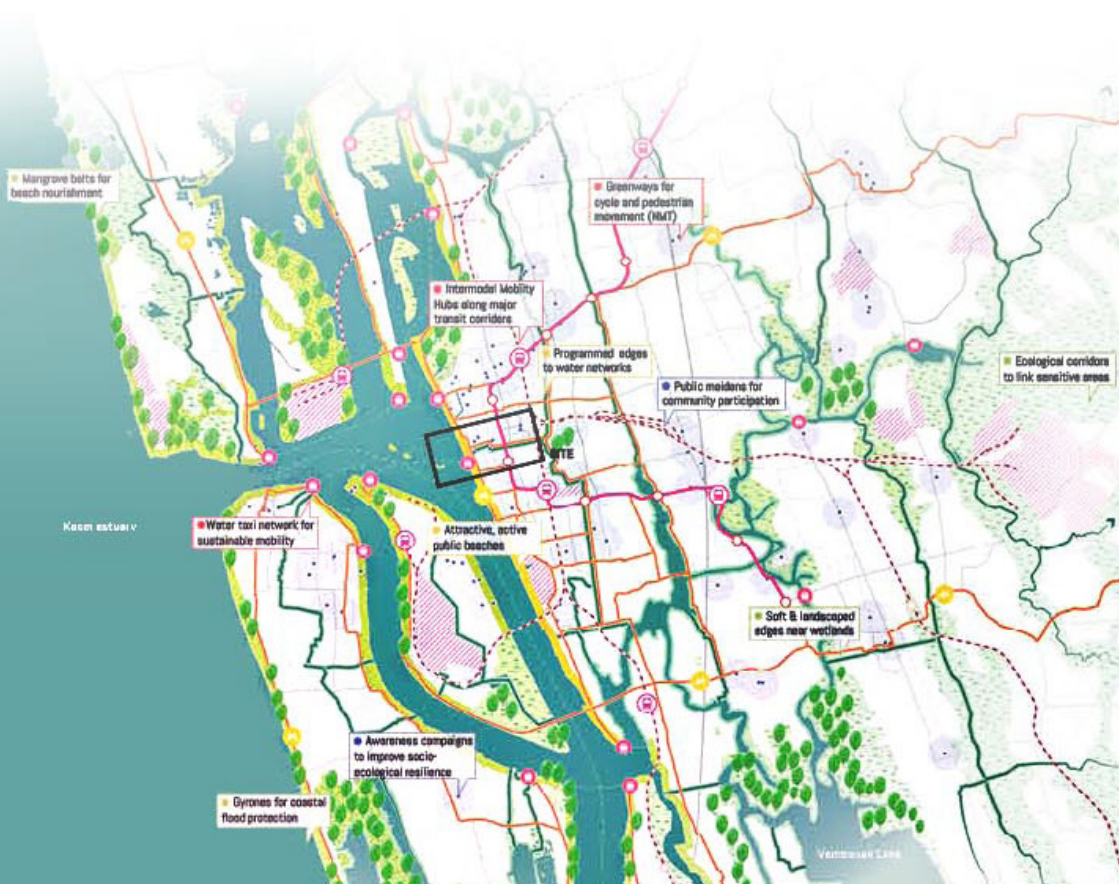


Catalyzing Integrated Urban Development in Indian Cities

Summary and Key Takeaways from GIZ-CRDF Knowledge Collaboration under Sustainable Urban Development-Smart Cities (SUD-SC) Initiative



January, 2022

This summary and key takeaways document is conceptualized and developed by City Collab for GIZ and CRDF under the SUD-SC initiative



As a service provider in the field of international cooperation for sustainable development and international education work, GIZ is dedicated to shaping a future worth living around the world. GIZ has over 50 years of experience in a wide variety of areas, including economic development and employment promotion, energy and the environment, and peace and security.



The CEPT Research and Development Foundation (CRDF) is the research and advisory arm of CEPT University. Through CRDF, the University engages actively in research projects, advisory assignments and capacity building initiatives aimed at solving critical problems in the built environment and improving people's quality of life in towns and cities.

The projects under the SUD-SC program were led by Center for Urban Planning and Policy (CUPP).

Catalyzing Integrated Urban Development in Indian Cities

Summary and Key Takeaways from GIZ-CRDF
Knowledge Collaboration under Sustainable Urban
Development-Smart Cities (SUD-SC) Initiative

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India is amidst a massive urban transformation, which is posing unprecedented challenges to its growing cities and towns in providing infrastructure, maintaining affordability and ensuring health and wellness of its citizens. By 2030, the country is expected to have over 600 million urban residents and about 12,000+ urban settlements.

ABOUT THE INITIATIVE

Context and Objectives

India's rapid pace of urbanization is expected to further compound the complex challenges that Indian cities face today with respect to provision of adequate services, infrastructure, and housing. To respond to these challenges, the Government of India (GoI) has established various national missions and programs such as the Swachh Bharat Mission (SBM), Atal Mission for Rejuvenation and Urban Transformation (AMRUT) and Pradhan Mantri Awas Yojna (PMAY). It has also reiterated its commitment towards the Habitat III Process (2016), the New Urban Agenda (NUA) on adequate shelter for all and the United Nations Sustainable Development Goal 11 on making cities inclusive, safe, resilient, and sustainable.

Successfully implementing these agendas and national missions requires institutions to adopt a cross-sectoral and integrated approach towards planning, and building knowledge and technical capacities among key urban actors at city, state, and national level. In this context, the "Sustainable Urban Development-Smart Cities" (SUD-SC) project was implemented to support the National Ministry and the State Governments (Odisha, Tamil Nadu, and Kerala) in policy formulation for housing, basic services, spatial planning, and monitoring of the SDGs. It also supported three selected Smart Cities (Bhubaneswar, Coimbatore, and Kochi) in implementing integrated spatial urban development planning concepts. The project was initiated jointly by the Ministry of Housing and Urban Affairs (MoHUA) and GIZ India.

Addressing the Urban Planning Capacity Gap

The NITI Aayog report on Reforms in Urban Planning Capacity in India emphasizes the role of educational and research institutions in generating new knowledge, training urban-planning and design professionals to work in the private and public sectors, and undertaking relevant research to inform policy and practice. This project focused on creating and disseminating new knowledge to catalyze integrated development in Indian cities targeted at the three sectors: government and public sector; private sector including urban development consultancies and real estate players; and research, academia and think-tanks.

Verticals of Cumulative Urban Planning capacity in India by NITI Aayog



Public Sector

- Central level
- State level
- City level



Private Sector

- Planning and architectural firms
- Management firms
- Real-estate firms
- Start ups



Education and Research

- Educational institutes
- International Assistance
- Research and capacity building

Project Partners

To generate thematic knowledge products and undertake research to foster capacities for sustainable urban development in India, GIZ collaborated with five premier national institutes. These institutes are: CEPT Research and Development Foundation (CRDF), Anna University; Centre for Policy Research (CPR); Indira Gandhi Institute of Development Research (IGIDR); Indian Council for Research on International Economic Relations (ICRIER).

CRDF-GIZ Partnership

This knowledge collaboration between CRDF and GIZ under the SUD-SC project is a continuation of over 20 years of partnership, sustained with the aim of advancing knowledge and action within the urban development realm. The key objective of this collaboration is to address challenges and opportunities in sustainable urban development by creating knowledge materials, anchoring training courses, and facilitating a platform for knowledge exchange.



Synergies with Global Urbanization Frameworks

Sustainable Development Goals

The Sustainable Development Goals (SDGs), also known as the Global Goals, are a collection of 17 important global commitment objectives “to achieve better and a more sustainable future for all”. Incorporating these goals into urban development practices is essential to address challenges such as health, poverty, inequality, and climate change. The objectives of SUD-SC project are predominantly synergistic with the SDG 11 for making cities and human settlements inclusive, safe, resilient, and sustainable. Through the SDG 11, this project is also interlinked with 8 other goals.

SUD-SC Initiative contributes significantly towards advancing United Nation's 2030 Agenda for Sustainable Development



New Urban Agenda

The New Urban Agenda is a global agreement which lays out a comprehensive set of action points for member nations to achieve sustainable urban development. Consequently, it acts as a catalyst to realize the SDGs, specifically SDG-11. In this regard the SUD-SC project finds significant synergies with the New Urban Agenda.

Synergies with National Urban Missions in India

The Smart Cities Mission

The Smart Cities Mission in India was launched with the objective of supporting 100 Indian cities for the duration of five years on area-based development and pan-city development. It aims to provide efficient core infrastructure, clean and sustainable environment, and a decent quality of life to citizens through smart solutions. The SUD-SC project was conceived as a means to provide support to three smart cities of Bhubaneswar (Odisha), Kochi (Kerala), and Coimbatore (Tamil Nadu) to integrate sustainable urban development for housing and basic services into their smart cities agenda. Insights derived from these cities are assimilated as knowledge materials for other cities to implement similar solutions.

AMRUT- Atal Mission for Rejuvenation and Urban Transformation

AMRUT is a GoI initiative that focuses on creating infrastructure to provide basic civic amenities to all citizens. The SUD-SC project recognized the challenges of infrastructure development in the face of rapid urbanization and growing climate crises, and supported the National Ministry and State Governments to meet the objectives of sustainable urban development which align with AMRUT.

PMAY- Pradhan Mantri Awas Yojana

PMAY is a flagship mission of the GoI which aims to increase home ownership across all income groups in urban and rural areas. Under the theme of 'Ensuring Affordability and Inclusivity in Housing', the SUD-SC project provided technical support and encouraged strategic thinking to address gaps in the capacities of the public and private sector to supply affordable housing .

PROJECT ACTIVITIES AND OUTPUTS

The research collaboration focused on creating and disseminating new knowledge to catalyze integrated development in Indian cities. The program activities were conceptualized under three objectives:

- 1. Increase meaningful, solution oriented knowledge materials on 'Integrated & Sustainable Urban Development'.**
- 2. Anchor training programs for state & non-state actors with an emphasis on adult learning pedagogy.**
- 3. Build support around pressing urbanization challenges of global south and facilitating knowledge exchange between government actors, civil society institutions and leading policy think tanks.**

Thematic Lenses

Efficient and sustainable planning, provision of basic services, and access to affordable housing remain some of the biggest challenges of rapidly growing Indian cities. These challenges are expected to further exacerbate as India's urban population continues to grow exponentially. Furthermore, citizen participation in urban governance in India, though mandated constitutionally, remains lacking in practice. This affects the poor communities the most as their needs are not adequately represented in development policies.



The SUD-SC project was a unifying platform for different actors to deliberate on four crucial aspects of integrated and sustainable urban development. These four thematic lenses align with GIZ's practice areas as indicated below.



Housing and Planning

Affordable housing
Integrated urban development



Basic Services and Infrastructure

Sustainable urban infrastructure



SDGs and Governance

Participatory urban governance



Affordable Housing

India's urban housing shortage is primarily concentrated within the economically weaker sections and the low income group sub-markets. Delivering quality affordable housing is a major urban planning challenge which can be addressed by integrated strategies targeted towards multiple sub-markets.



Participatory Urban Governance

Participatory urban governance in India is lacking in practice despite its constitutional mandate. It is a crucial civic engagement tool that can be reinforced through institutional changes, building capacities of communities, and maintaining sustained engagement with them.



Integrated Urban Development

Integrated Urban Development fosters transversal and multidimensional approaches towards city planning by aligning spatial, economic, social, and environmental components. Successfully implementing such approaches requires efficient collaborations between key urban actors.



Sustainable Urban Infrastructure

Hazards posed by climate change are increasing the vulnerability of urban population and infrastructure. Conventional network designs need to be redefined by focusing on solutions that promote resilience by employing blue and green assets to safeguard against urban flooding, water scarcity, and other effects of climate change.

RESEARCH AND KNOWLEDGE MATERIALS

One of the core agenda of the SUD-SC project aimed at improving research and creating knowledge on innovative integrated and sustainable urban development solutions to support urban practitioners, government officials, elected representatives, academia, private sector, and others. CRDF and CEPT University also engaged students in Directed Research Projects on the thematic areas. Additionally, this synthesis document was conceptualized to record key learnings from the events conducted during the SUD-SC initiative.

5

Case studies on the thematic areas and the scope of digital collaboration to enhance citizen participation in governance

1

Urban Research Study on urban spatial data framework for small and medium towns

9

Directed Research Projects that engaged students from CEPT University in research and knowledge development

1

Summary and key takeaways document synthesizing insights from the policy roundtables and outreach programs

National Case Studies

Case studies are an effective way to advance knowledge by analyzing existing conditions to illustrate and derive important principles and empirical data. They are commonly used as teaching tools as they provide a framework for learners to deeply study complex situations and extract valuable insights. These insights inform theories which subsequently inform good practices. The four national case studies conceptualized by CRDF aims to educate planners, policy makers, and other urban actors on the thematic topics and enable them to emulate solutions meaningfully. Conceived as pedagogical tools for a wide range of urban actors, each case study is divided into three parts: Introduction to the Case; Main Case; Teaching Notes and Case Archive.



CASE STUDY 1

- SDG 9
- SDG 10
- SDG 11
- SDG 17

A Critical Analysis of the Efficacy of Institutional Framework in the Urban Planning Process of Kochi and Coimbatore

The study analyzes frameworks that guide the formulation of development plans in Kochi and Coimbatore comparing it to on-ground practices.

CASE STUDY 2

- SDG 3
- SDG 6
- SDG 9
- SDG 11
- SDG 13

Building Flood Resilience Through Interlinking of Lakes- Ahmedabad Case Study

Using the case of Ahmedabad's lake redevelopment project this study introduces the need for sustainable water management systems in cities and recommends comprehensive measures to implement similar projects.

CASE STUDY 3

- SDG 5
- SDG 10
- SDG 11

Improving Access to Shelter and Services for Urban Poor Through Participatory Platforms

Through the cases of Kerala and Odisha, this study attempts to assess the efficacy of participatory platforms in enabling the urban poor to represent their interests and influence decisions.

CASE STUDY 4

- SDG 1
- SDG 3
- SDG 6
- SDG 9
- SDG 10
- SDG 11

Enabling Markets to Augment Supply of Affordable Housing Through Inclusionary Zoning

This study explores the efficacy of Inclusionary Zoning and Regulations (IZR) at a global and a national level. Analyzing Ahmedabad's case, the study provides recommendations for other cities to design context specific IZR policies.

International Case Study

CASE STUDY

- SDG 9
- SDG 10
- SDG 11
- SDG 17

Digital Collaboration and Participation in Urban Planning through CityScope/ TOSCA

This study examines the scope of digital tools in advancing collaborative and participatory planning processes. It studies the application of CityScope (now Toolkit for Open and Sustainable City Planning and Analysis or TOSCA) in cities such as New York, Boston, and Hamburg. It also records learnings from its application in the 'Ente-Kochi' Competition, and in Bhubaneswar to offer recommendations and suggestions to localize similar tools in the Indian context.

Urban Research Study

RESEARCH

- SDG 3
- SDG 9
- SDG 10
- SDG 11

Urban Spatial Data Framework for Small and Medium Towns

This study establishes the need to focus on robust planning frameworks for small and medium towns (SMTs) in India as they play a major role in providing socio-economic linkages to both cities and rural areas. It highlights the lack of technical and institutional capacities to formulate data-driven, GIS-based plans. In this context, the study suggests some key recommendations for spatial planning in SMTs of India.

Directed Research Projects (DRPs)

The Directed Research Project (DRP) at CEPT University offers students the opportunity to participate in ongoing and professionally run research programs led by faculty members and external partners. It also supports diversity of intellectual thoughts and practices within the university. Nine students were engaged as researchers under the GIZ-CRDF knowledge collaboration. Inputs from students' individual research projects contributed to development of case studies and knowledge material.

DRPs on Integrated Urban Development

- 1** **Analyzing Institutional Framework for Urban Planning in Indian Cities: Featuring Master Plan Preparation and Approval System in Kerala**
Pavithra Nelson
- 2** **Urban Spatial Data Infrastructure in Context of Small and Medium Towns in India**
Dhwani Chawla
- 3** **Institutional Frameworks for Urban Planning in Indian Cities: A Case of Odisha**
Kavita Raut
- 4** **Institutional Frameworks for Urban Planning in Indian Cities: A Case of Tamil Nadu**
Shreya Busnur

DRPs on Sustainable Urban Infrastructure

5

Climate Resilient Infrastructure in India: Stormwater Drainage System. Case Study: Chennai

Shivani Singh

6

Enabling Low Impact Development Using Sustainable Infrastructure Practices in Indian Cities

Amita Thakwani

DRPs on Participatory Governance

7

Urban Governance of Kerala: Participatory Platforms in Urban Governance and Assessing their Effectiveness with Focus on Urban Poor

Nandana LS

8

Digital Participation through CityScope: A case of Bhubaneswar

Shivani Singh

DRPs on Affordable Housing

9

Assessing the Effectiveness of Inclusionary Zoning and Regulations in the Residential Affordable Housing Zone of Ahmedabad

Vishal Chudgar

TRAINING AND CAPACITY BUILDING

In India, urban professionals and actors often lack the required technical capacity to translate knowledge and theory into good practice. Hence, CRDF anchored intensive training and capacity building programs for key urban actors, drawing insights from the research and knowledge creation undertaken within the scope of the SUD-SC project. These trainings were delivered as facilitated training programs as well as self-paced training courses.

4

Training programs conducted in the states of Kerala, Odisha, and Tamil Nadu

269

Urban actors including government officials, researchers and academics, and urban planning/ architecture students trained

33

Cities from across India represented in the training programs

3

Self-paced learning modules or NULP developed with the aim of building capacities

Facilitated Training Programs

15-17

July, 2021

Sustainable Urban Infrastructure and Nature-Based Solutions

The module focused on the need for sustainable and Nature-based Solutions, followed by challenges of implementation. Using examples of strategies from Chennai, Kolkata, Rotterdam, Singapore, Bhubaneswar, and Ahmedabad, discussions were held on mainstreaming SUI through policy frameworks and community engagement.

28-29

July, 2021

Sustainable Urban Planning

The training highlighted various planning approaches from Gujarat, Maharashtra, Germany and South Africa. Lack of financial and technical capacities of institutions, and multiplicity of sectors and agencies involved, were identified as significant challenges of implementation. Strong emphasis was laid on the importance of data and knowledge sharing, especially in the global south.

19-20

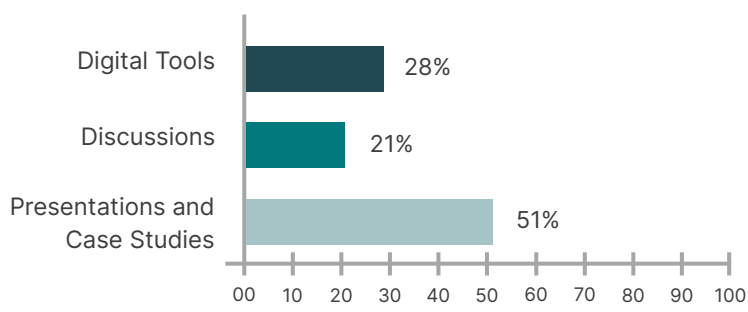
Aug, 2021

16-18

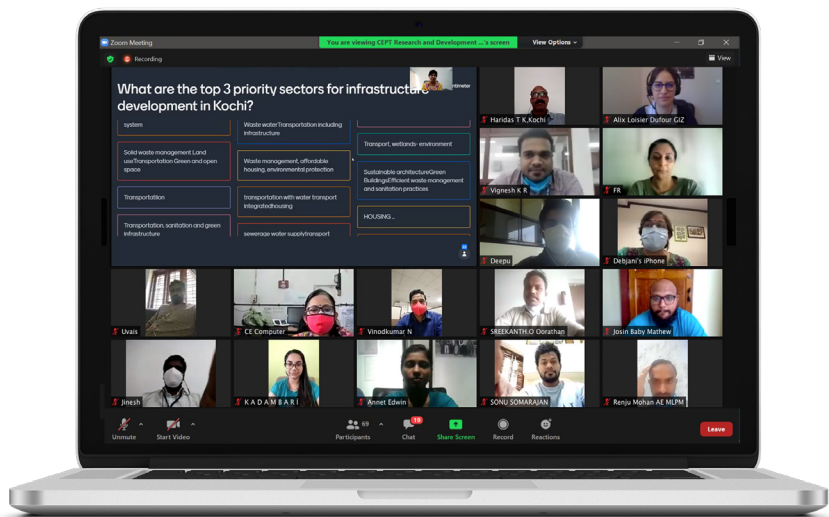
Sept, 2021

Digital tools and interactive activities such as Stop Disasters Game, Green Values Stormwater Management Calculator, Climate Resilience Cities Toolbox, I-tree Eco, and EPA Stormwater Management Model helped the participants get a better idea of the process involved in implementing sustainable infrastructure projects.

The ongoing pandemic has made online learning and engagement indispensable. Without the benefit of physical connections, audience participation and interactive sessions hold immense value as they help break the ice among participants and keeps them interested. The moderators of the training programs used interactive tools to gauge the audiences' understanding of the topics discussed. Their feedback was also recorded through questions such as 'what part of the training aided your learning the most?'



Participant feedback on helpful learning tools



Training on Sustainable Urban Planning, Kochi

Self-paced Learning Courses

Self-paced learning methods are a popular mode of instruction due to their flexible nature and easy accessibility of learning materials online. CRDF has designed three courses, available on their digital repository, for students and professionals with a background in urban planning and development. Each course is divided into modules greatly detailing out fundamental concepts and case studies.

Sustainable Urban Planning

This module enables learners to apply sustainable urban planning concepts into practice using key tools for preparation and implementation of urban plans. It gives an overview of the policies and frameworks that guide the master planning process in India and explores the challenges and opportunities that exist in the current planning system.

Sustainable Urban Infrastructure

This module introduces the link between cities, sustainability, and infrastructure, highlighting the current state of urban infrastructure in India. It describes in detail, strategies such as Nature-based Solutions, Low Impact Development and DeWATS (Decentralized Wastewater Treatment Systems), and provides ways to mainstream such solutions.

Integrated Housing Strategies

This module examines global and national trends in affordable housing policies. It discusses integrated strategies such as Inclusionary Housing, to enable markets to close the demand-supply gap in housing. It also explains the concept of Informal Housing Supply Continuum and the importance of affordable rental housing in India.

Modules of the learning courses

Sustainable Urban Planning

Making planning work in India

National urban planning- policies and programs

Sustainable urban planning practices in India

Data and surveys for urban planning

Development plan preparation and implementation strategy

Examples of town planning schemes/ area development scheme

Examples of local area planning

Sustainable Urban Infrastructure

Introduction to sustainable urban infrastructure

Nature-based solutions

Low impact development

Decentralized wastewater treatment system

Case study

Integrated Housing Strategies

Global housing challenge and the need for an integrated housing strategy at the local level

Inclusionary housing in United States

Enabling markets to augment supply of affordable housing

Informal housing supply continuum

Affordable rental housing in India



KNOWLEDGE EXCHANGE AND STRATEGIC OUTREACH

The events and strategic outreach programs of the SUD-SC project facilitated global knowledge exchange and peer-to-peer learning among various urban actors. The project was implemented during the difficult times of the pandemic, which posed challenges of mobilizing participants, especially government actors. However, the technology enabled working model triggered by the pandemic, also opened-up possibilities of cross-organizational and cross-geographical collaboration and accelerated knowledge transfer and ideation.

4

Policy roundtables

1

Annual symposium

1

Digital platform for knowledge resources

62

Number of speakers and contributors

127

Number of policy makers and government officials reached

195

Number of research institutions, and think-tanks represented in discussions

Policy Roundtables

03

Mar, 2021

Exploring Possibilities for Mainstreaming Sustainable Urban Infrastructure in Indian cities

The roundtable emphasized the emerging need of integrating Nature-based Solutions in planning and management of urban infrastructure. It brought to light experiences from Singapore's "ABC Program", "Sponge City" initiative from South Asia, and many other innovative solutions from Panaji, Kochi, Indore, Chennai, and other cities.

30

April, 2021

Prioritizing Spatial Inclusion and Creation of Affordable Housing through Inclusionary Zoning in Indian Cities

The second roundtable focused on the global experience of Inclusionary Zoning (IZ) as a tool for spatial inclusion and augmenting supply of affordable housing especially for the lower income groups. Success of IZ in Ahmedabad was taken as a case to understand the effectiveness of the policy and its application in other Indian cities.

International Policy
Roundtable on Inclusionary
Zoning Practices in
India and South Africa



27

Aug, 2021

Improving Access to Shelter and Basic Services for the Urban Poor through Participatory Platforms

The third roundtable discussed the experience of participatory governance in India and the challenges in creating and sustaining such platforms. It also deliberated on the effectiveness of such spaces for the urban poor and possible alternatives to increase their involvement.

03

Sept, 2021

Knowledge Sharing on Inclusionary Zoning as a Spatial Planning Tool in India and South Africa

The International Roundtable saw experts from various cities in India and South Africa sharing experiences of Inclusionary Zoning and Inclusionary Housing in the global south. Integration of Inclusionary Zoning and Regulations into local spatial plans and other city level planning instruments were also discussed.

“

The international policy roundtable was a wonderful and inspiring exchange of ideas. South-to-South exchanges are particularly important for knowledge exchange, learning from each other and sharing problem solving solutions to address global problems like affordability.

Dr. Enrique D. Silva, Lincoln Institute of Land Policy

International Symposium on “Cities and Pandemic: Rethinking Urban Morphologies”

Plan OK Please is an annual symposium for advancing the concepts of integrated spatial and land use planning and management in Indian cities. In 2021, the symposium was organized under the SUD-SC project on “Cities and Pandemic: Rethinking Urban Morphologies”. It addressed the need to rethink urban planning practices to make them more sustainable, resilient, and inclusive as a consequence of the covid-19 pandemic. The symposium brought in experts from India, Germany, South Africa, and Brazil to share insights on the four domains of Urban Governance and Policies, Urban Spatial Planning, Nature-based Solutions, and Affordable Housing.

28

Sept, 2021

Rethinking Urban Governance and Policies

The session on the experience of participatory governance practices in India, specifically focused on the states of Kerala and Odisha. Drawing insights from the efforts in Kerala to tackle the effects of the pandemic, emphasis was laid on the role of local governments and community groups to mobilize essential services.

29

Sept, 2021

Rethinking Urban Spatial Planning

The session stressed upon the role of urban planning as the key to building resilience against future climate or health crises. The discussants expressed the need for sustainable and inclusive solutions derived from collaborative and participative approaches, and emphasized on the importance of benchmarking the provision of healthcare and public infrastructure.

CITIES AND PANDEMICS

Rethinking Urban Morphology



29

Sept, 2021

Rethinking Nature-based Solutions

The session emphasized on the need for sustainable urban infrastructure in light of increasing instances of climate change related challenges. Challenges arising from the lack of technical and financial capacities to conceptualize and implement such solutions were discussed and the need for capacity building among urban local bodies was established.

29

Sept, 2021

Rethinking Affordable Housing

The session asserted the need for a multilateral approach to address the housing shortage crises, which was further compounded by the covid-19 pandemic. The speakers offered important considerations, while addressing housing affordability, such as the significance of location of the house, and provision of basic infrastructure services in informal settlements regardless of the nature of land tenure.

SUKALP Digital Repository

Sustainable Urban Knowledge and Action Learning Platform (SUKALP) is a digital resource platform for focused information exchange and synergies on urban planning domain in the Indian context. Initiated by CRDF, the website is a collaborative effort between GIZ's SUD-SC grantee partners in India. It aims to explore the creation and hosting of knowledge material that leverages thematic research and contributes to the overall knowledge base of integrated and sustainable urban development in India. SUKALP is expected to expand into an organic and growing collaboration of credible national organizations, academic and training institutes, resource centers, consultants and sector experts. This shall enable a multi-disciplinary view on various themes that SUKALP offers, with the member organizations building on each others' expertise.



LEARNINGS AND KEY TAKEAWAYS

-  **Ensuring Affordability and Inclusivity in Urban Housing**
-  **Deepening Participatory Urban Governance**
-  **Advancing Integrated Urban Development**
-  **Encouraging Sustainable Urban Infrastructure**



Ensuring Affordability and Inclusivity in Urban Housing

Housing Unaffordability in India

Housing unaffordability is a global urbanization challenge which results in residents experiencing increased financial stress or living in sub-standard housing without access to basic services and infrastructure. In India, the crisis is worsening as the housing shortage increased from 18.87 million in 2012 to 29 million in 2018 (Deepa Roy and Meera ML). This scarcity is primarily concentrated in the economically weaker sections and the lower income groups driving them to live in informal settlements in unsanitary conditions and with limited services and infrastructure.

Addressing these challenges, requires an integrated approach consisting of multiple solutions which cater to the housing needs across all income brackets. These strategies must recognize that housing is an integrated market wherein failure in one sub-market leads to failure across the housing market. In addition to augmenting the supply of housing through relaxed market regulations and inclusionary zoning, strategies must also focus on public land management, and upgrading slums with basic services to attend to the lack of utilitarian and social infrastructure, and improve access to employment and livelihood opportunities.

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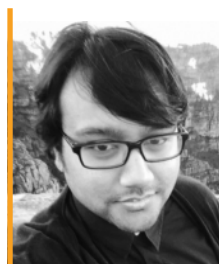
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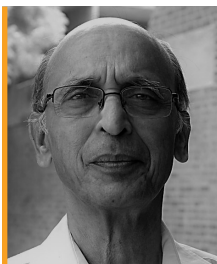
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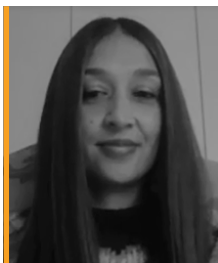
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01.

Incentivizing construction of 'affordable housing' features prominently in the national agenda in India.

“ Government of India has multiple policy frameworks to encourage construction of 'affordable housing' (units less than 60sq.m.). Other than central assistance to cities to construct public housing, there are incentives for private sector to enter the affordable housing market. These include income tax holidays, reduction in Goods and Services Tax and priority lending for affordable housing projects.

DR. SEJAL PATEL, CEPT UNIVERSITY, GUJARAT

02.

There should be an increased focus on not just augmenting supply of affordable units but ensuring that affordable housing is well located with access to jobs, transport and infrastructure.

“ South African cities have a stark problem of spatial inequality. The poor are concentrated far away from the city center. The focus of current inclusionary housing policy that is under development is on promoting well located housing opportunities.

CATHERINE STONE, WESTERN CAPE GOVERNMENT, S. AFRICA

“ Our research in Chennai reveals the challenges the poor face when they are moved to the periphery without sufficient transportation. Livelihoods are the most impacted, particularly for women who have to balance household responsibilities with longer commute.

DR. MAARTJE VAN EERD, ERASMUS UNIVERSITY, NETHERLANDS

03.

Inclusionary housing regulation can encourage supply of smaller affordable units in market led housing. However it does not offer a solution to address affordability challenges at scale.

“ The inclusionary zoning framework in Ahmedabad is voluntary. Private developers get incentives to construct smaller units in the Residential - Affordable Housing Zone (RAH) in the form of reduced land premiums for additional building rights and reduction in parking. Around 31,000 have been sanctioned in the last seven years, 20% of which are smaller unit sizes and in the affordable category. This supply is only 2% of the 1.5 Million dwelling units projected for 2035.

DR. SEJAL PATEL, CEPT UNIVERSITY, GUJARAT

“ Inclusionary housing at the most can meet the incremental demand of low income housing but can't address the backlog of adequate housing, especially in cities like Mumbai where 55% of the population resides in slums. The regulations often prescribe the size of units and the price ceilings for renting/selling these units. Sometimes the regulation also extends the control to 'who gets the housing'. More controls might result in further contraction of the market.

VIDYADHAR PHATAK, FORMER CHIEF TOWN PLANNER, MMRDA, MAHARASHTRA

“ Most of us recognize that inclusionary housing on its own cannot fully address all the dimensions and needs of our housing sectors, but experience demonstrates that it can produce affordable housing units in desirable locations, and in perpetuity. We will need to leverage many different tools and approaches in parallel to address the global housing crisis.

DR. ENRIQUE SILVA, LINCOLN INSTITUTE OF LAND POLICY, USA

04.

Housing finance has to become more accessible, especially for lower income groups, who need it the most.

“ 96% of the total housing shortage in India is in the category of economically weaker sections and lower income groups. It is important to make housing finance accessible to these buyers who have stable incomes but often lack formal income documentation.

MONU RATRA, IIFL HOME FINANCE LTD., DELHI

05.

Slums and informal settlements offer well located supply of affordable housing for the low-income population. But the Covid-19 pandemic brought to light public health concerns in these areas. Governments must prioritize extending essential services in informal settlements.

“ The informal housing market is an affordable rental market. Public policy that recognizes the informal market and supports it has tremendous potential. While we need to work on the supply of affordable housing, it is equally important to extend basic services, especially water and sanitation, and improve the quality of life in informal settlements.

ANNACLAUDIA ROSSBACH, CITIES ALLIANCE, BRAZIL

06.

Appropriating land in public domain for long-term provision of public social housing is critical to ensuring spatial equity and inclusion in cities.

“ Land cost often is the single biggest contributor to the overall cost of housing. That is why a lot of affordable housing gets constructed in areas faraway and disconnected from the city where the land is cheap. One of the biggest learning from our work is that if we need to supply housing to the poor, cities need to find creative ways to reduce land costs and share land value gains.

APARNA DAS, GIZ, DELHI

“ Gujarat has been progressive in using the Town Planning Scheme (TPS) mechanism as a tool to appropriate private land for public uses, including for public housing for the economically weaker sections. The TPS employs land pooling and reconstitution to manage planned urban expansion. About 80,000 public housing units have been constructed on the land bank created through TPS. And these housing projects are dispersed all across the city and are well connected to transport and infrastructure.

DR. SEJAL PATEL, CEPT UNIVERSITY, GUJARAT

“ Land is at the center of discussion in S. Africa where we have a severe problem of spatial inequity. The focus is on thinking strategically with regards to capturing land value and managing municipal land assets to trigger spatial transformation towards more equitable cities. One strategy is to reserve municipal land to unlock well located serviced land for social housing. It is very insightful to hear about the model of land donations/appropriation through TP schemes and how that works in tandem with inclusionary housing.

HELEN ROURKE, DAG, S.AFRICA

07.

Housing has to be viewed as an integrated market. Narrowing the focus of housing policy to only addressing 'low cost' housing could be counterproductive.

“ *Housing in India is largely a market product. The share of public housing is very limited. It is of utmost importance hence to understand the housing market as a whole. The housing market is spatially bound to a city/ region and functions as a continuum. The distinction between formal and informal is artificial and not static. For example by relaxing regulations, more housing can be supplied formally at lower costs. And some proportion of the buyers who are currently part of the informal market will shift to the formal market.*

VIDYADHAR PHATAK, FORMER CHIEF TOWN PLANNER, MMRDA, MAHARASHTRA

“ *The housing market of the city may have several sub-markets but is an integrated market where market failure in any sub-market has ramification across the city. Housing policy has to handle distortion and barriers across all sub-markets, rather than focus only on lower-income sub-market. It should focus on improving access to affordable housing for all income groups. In this context, the role of government is to enable the market to supply more housing at lower costs and then to right size subsidies and target them better to the lowest income group who can't be catered by the private housing market.*

DR. SEJAL PATEL, CEPT UNIVERSITY, GUJARAT

08.

Regulations and high standards for formal housing often force inefficient use of land and impose additional costs, thus constraining delivery of affordable housing.

“Urban land is scarce and costly. For a housing unit, two-third of the cost component is towards the cost of land. Using land more intensively, especially in well located areas can reduce the cost of land component in construction thus bringing down the price of housing. However the stringent FSI regulations existing in most cities restrict the amount of floor space that can be built on a given piece of land.

AJAY SURI, NIUA, DELHI

09.

Local governments must maintain a database of key supply and demand side indicators to formulate city-specific housing policy

“We need granular data to understand the housing market and to design housing policy tailored to a city. National data is incomplete and inadequate to provide this specific data. On the demand side we need data on incomes, income distribution and access to housing finance. On the supply side, we should have a record of how many houses are being constructed and supplied every year, what sizes, at what locations and at what prices. Unfortunately cities don't maintain this important database.

VIDYADHAR PHATAK, FORMER CHIEF TOWN PLANNER, MMRDA, MAHARASHTRA



Deepening Participatory Urban Governance

Urban Governance Frameworks in India

Participatory processes are robust methods for inclusive and integrated development of cities. In India, decentralization and participatory urban governance were first attempted through 74th Constitutional Amendment Act (74th CAA) in 1992, devolving functions and powers to municipal bodies and making provision for the constitution of 'ward level committees'. Participatory governance and decentralization processes were once again reinforced in 2005 through JNNURM's Community Participation Law (CPL) by introducing another tier of decision-making below ward level, i.e., the 'area sabhas'. However, even after almost 30 years of 74th CAA, the decentralization and participatory governance processes have been underwhelming in their implementation. Limited platforms for participation were created within the scope of program delivery under pro-poor initiatives like National Urban Livelihood Mission (NULM) and National Urban Health Mission (NUHM).

In the context of new challenges of urbanization, there is a need to reinforce participatory urban governance. Working on institutional changes, building capacity of communities and maintaining sustained engagement with them are important factors for making participatory urban governance work.

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01.

In the context of urban governance, it is important to establish a distinction between 'Decentralization' and 'Participatory Governance'.

“ *Decentralization refers to the devolution of functions and finance to lower tiers of government. Participatory urban governance is further rescaling of power to participatory tiers in local government. For example in Kerala, decentralization is moderate but there is a high degree of participatory governance.* ”

DR. SEJAL PATEL, CEPT UNIVERSITY, GUJARAT

02.

There has been very slow progress in institutionalizing both Decentralization and Participatory Governance in Indian cities.

“ *Local participation is vital for sound governance. And that is emphasized in NITI Aayog's mission. Nationally funded programs like the National Urban Livelihood Mission and National Urban Health Mission encourage involvement of local communities. But in terms of decentralization, progress has been slow. Urban development is a state subject. States will have to embrace this agenda proactively.* ”

DR. RAJESWARA RAO, NITI AAYOG, GOVERNMENT OF INDIA

“ *One of the principal reasons for slow progress of participatory local governance is that the State still sees participation at a programmatic level, as an instrument of service delivery and poverty reduction and not as a means to deepen democracy.* ”

SRIKANTH VISWANATHAN, JANAAGRAHA CENTRE FOR CITIZENSHIP AND DEMOCRACY, KARNATAKA

03.

Covid-19 pandemic brought to light the importance of bringing decision making closer to citizens.

“ Covid-19 has reemphasized the importance of urban local governance. There is evidence that suggests that in the initial stage, States like Kerala and Odisha with existing citizen institutions were able to mobilize a faster emergency response. The existence of multiple participatory platforms: Kudumbshree, Ward Committees, and People's Plan Campaign and their convergence makes Kerala an important case study in participatory urban governance.

DR. SEJAL PATEL, CEPT UNIVERSITY, GUJARAT

“ The pandemic has been an important lesson in synchronizing functioning of all three tiers of government and interdepartmental coordination. Local governments in Kerala were able to leverage existing participatory platforms to very quickly put into action the response plan like forming neighborhood ward committees to act as first responders.

SARADA MURALEEDHARAN, IAS, GOVERNMENT OF KERALA

“ Their is a growing recognition especially after the pandemic to devolve funds, functions and functionaries to local governments. I am hopeful this will translate to effective decentralization.

DR. K. RAJESWARA RAO, IAS, NITI AAYOG, GOVERNMENT OF INDIA

“ Learning from the pandemic, we have set up Ward and Village Secretariats. This is an experiment in reducing intermediaries by mobilizing a volunteer network to deliver services at door.

DR. SAMEER SHARMA, IAS, GOVERNMENT OF ANDHRA PRADESH

04.

There is growing civic energy, especially around managing public commons. Positive examples of participation also exist in programmatic platforms like livelihoods and health.

“ *Neighborhood groups are coming together to care about commons. These are issue based platforms and not necessarily inclusive. Despite these downsides, it is important to recognize this growing civic energy. The Kudumbshree and Mission Shakti platforms in Kerala and Odisha are also interesting examples of mainstreaming participation of people especially the poor and women in delivery of Government programs.*

SRIKANTH VISWANATHAN, JANAAGRAHA CENTRE FOR
CITIZENSHIP AND DEMOCRACY, KARNATAKA

05.

Gender equity, climate change and health and wellness can become catalysts to push the agenda of participatory governance.

“ *There is no participation fatigue seen in Kudumbshree because it is essentially a platform to empower women both socially and politically, and is not just a livelihood platform.*

DR. ANGELIQUE CHETTIPARAMB, UNIVERSITY OF READING, UK

“ *The importance of last mile governance in the current context of covid and climate change offers a context for city leaders to come together to demand decentralization of powers.*

SRIKANTH VISWANATHAN, JANAAGRAHA CENTRE FOR
CITIZENSHIP AND DEMOCRACY, INDIA

06.

The emergence of geospatial solutions offers avenues to foster participation, both in terms of involving communities and promoting cross sectoral collaboration between departments.

“ *The JAGA mission, Odisha’s ambitious land titling program demonstrates how geo-spatial mapping and data analytics can foster community participation. The mapping process was iterative and participatory. As part of the community organization process, NGOs utilized high resolution aerial images to engage people in spatial mapping. People’s inputs were annotated on the maps and fed into the digitization process creating an exhaustive and accurate geo-spatial database. It is important that local governments take ownership of this database, enrich it further by adding existing government data and open data layers and use this as collaboration and decision making tool.*

DR. ANTARIN CHAKRABARTY, JAGA MISSION, ODISHA

07.

Deepening grassroots democracy requires a long term view. The focus has to be on process rather than on delivering outputs in the short term.

“ *Recognizing local governments as institutions of governance is critical. There is currently a huge breakdown of trust between State and City Governments, both amongst bureaucratic and political actors. Civil Society and academia have to come together to push this agenda forward over a ten to fifteen year period.*

SRIKANTH VISWANATHAN, JANAAGRAHA CENTRE FOR
CITIZENSHIP AND DEMOCRACY, KARNATAKA





Advancing Integrated Urban Planning

Making Urban Planning Work in India

India's urban population is inching towards 40% of its total population and cities are expected to contribute about 75% of National GDP by 2030. In this context, it is important to adopt an integrated approach to city planning and urban management. Urban planning is considered to be an essential instrument to plan and achieve sustainable growth of cities and improve efficiencies to ensure cross-sectoral linkages.

Cities in India are rethinking urban spatial planning frameworks. The focus is now growing from statutory documents which address land use, floor space index and building norms, to development plans which confront a vast array of issues from heritage conservation and transit-oriented development to climate change and natural disaster management. We need integrated urban development plans which reflect and capture the spirit of comprehensive development. Such plans cannot be restricted to the boundaries of a city and limited to the jurisdiction of a Municipality or a Corporation. Development plans must therefore encompass regions beyond the jurisdiction of the city to include all continuous areas with high potential for urban development.

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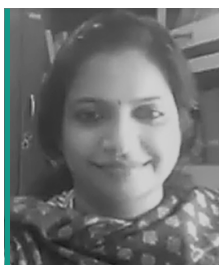
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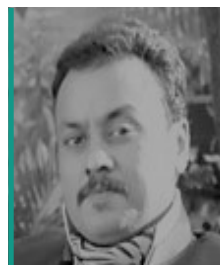
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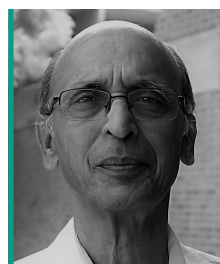
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01.

Urban planning in India is approached as a once in twenty years plan-making exercise. While many cities have statutory 'Master Plans' to guide spatial growth, cities continue to grow in disorderly manner and remain inefficient, unsafe, uncomfortable and unjust.

“ *The traditional 'predict, design and provide approach' to planning is not working. Cities evolve and grow. In face of rapid technological changes, it is impossible to predict future and make very specific plans. Planning needs a paradigm shift. Plans should be specific only where necessary and allow for flexibility.*

DR. BIMAL PATEL, CEPT UNIVERSITY, GUJARAT

“ *Cities are dynamic. Market forces affect the form, shape and fortunes of cities. Plans should acknowledge, accept and integrate existence of markets and market changes.*

C.K. KOSHY, CRDF, GUJARAT

“ *'Master Plans' in the context of Indian cities often over-promise and under deliver. It is important to recognize that Master Plan is not a panacea to solving all urban issues. It is a land planning tool that has to work in tandem with governance and management instruments.*

DR. SASWAT BANDHYOPADHYAY, CEPT UNIVERSITY, GUJARAT

“ *City making is a process. Plans shouldn't be viewed as mere products or outputs but as a continuous, iterative process. We need to put in place enabling frameworks and systems that will allow planners to work in multidisciplinary teams and engage with cities and their challenges.*

APARNA DAS, GIZ, DELHI

02.

Urbanity manifests at different scales. Statutory planning frameworks should allow for spatial development interventions at state, regional, city and local levels.

“ *The legislative framework for spatial planning in Germany works across different scales of planning. Cities prepare their own statutory plans. Regional plans address issues of connectivity at the metropolitan level. The unique concept of partnership development zones allow for collaboration and planning across regions and across national borders!*

GEORG JAHNSEN, GIZ, DELHI

“ *Maharashtra has had a history of preparing regional plans. But these plans are not very effective, and focused only on land use and regulatory controls. Regional plans should focus on regional level transport networks and a spatial strategy for outward expansion of urban areas. Cities also have Development Plans but fall short of securing land for public purposes and allowing efficient functioning of land markets. Unfortunately, local level planning is dormant in Maharashtra and needs to be revived.*

VIDYADHAR PHATAK, FORMER CHIEF TOWN PLANNER, MMRDA, MAHARASHTRA

“ *Ahmedabad employs a multi-stage planning process. The DP puts in place a city level framework for spatial growth and TP schemes are plans for peripheral expansion. More recently Ahmedabad has also started preparing local area plans to improve infrastructure and public spaces in inner city areas and support densification around transit.*

DEEPA DAVE, AUDA, GUJARAT

03.

Gujarat offers lessons in leveraging statutory planning instruments to deliver multiple objectives, from managing peripheral growth, to delivering public infrastructure and housing, and supporting post disaster rehabilitation.

“Gujarat over the years has developed a strong culture of urban planning. The State has reviewed and amended the Planning Acts periodically to make planning work. There are established institutional frameworks for collaboration at the metropolitan and city level. Ahmedabad's Development Plan is jointly prepared by the Municipal Corporation and the Development Authority.

DR. SASWAT BANDHYOPADHYAY, CEPT UNIVERSITY, GUJARAT

“Gujarat has built a robust institutional capacity for accelerating planning, and formulating and implementing urban plans and programs at the state as well as city level. The State Town Planning Department has a team of qualified planners and urban infrastructure specialists and has supported more than hundred cities to prepare plans and implement projects and programs.

PARESH SHARMA, GOVERNMENT OF GUJARAT

“Ahmedabad has been using statutory planning instruments to not just plan for spatial growth and connectivity at the city level but to also address and improve infrastructure, public spaces, urban form in special districts like CBDs and heritage zones. The land pooling and reconstitution mechanism of TP schemes is a very effective tool to manage peripheral expansion and appropriate land for roads and public infrastructure like housing, parks, schools etc.

UTKARSH PATEL & AMIT GOTECHA, CRDF, GUJARAT

04.

The recent pandemic has sparked an interest in rethinking how urban planning and design can act as a catalyst for health and social well-being.

“ *Settlement form is closely intertwined with contagion patterns and access to food, healthcare and sanitation. The UN-HABITAT's report on 'Cities and Pandemics' outlines strategies to improve resilience to future shocks.*

RAFAEL TUTS, UN-HABITAT

“ *The migrant crisis triggered by the pandemic pushes us to think how we can make our cities more 'caring' where our labor force feels at home and has access to a decent living environment.*

K.T. RAVINDRAN, URBAN DESIGN EXPERT, INDIA

“ *The 'Post Corona City', a program by the City of Frankfurt and actively supported by businesses and citizens, invited ideas to make the inner city more active, productive, sustainable and just.*

ANDREA SCHWAPPACH, FRANKFURT CITY PLANNING OFFICE, GERMANY

“ *While the pandemic has triggered re-imaginings on integrating disasters and health emergencies in our spatial understanding of development, we should be continually working on improving planning and governance to make cities inclusive and resilient.*

DR. ALEXANDER JACHNOW, ERASMUS UNIVERSITY, ROTTERDAM

“ *The renewed attention to neighborhood and cities post pandemic is an opportunity to engage people in city making process.*

AVANISH PENDHARKAR, CRDF, GUJARAT

05.

Parallel to the statutory planning framework, there has emerged the idea of ‘strategic integrated planning process’ to holistically address complex urban issues across sectors.

“ Cities have to address multiple and complex challenges, from ensuring affordable housing and public social services to addressing environmental and climate change risks. Integrated urban planning in Germany emerged as a strategic planning framework outside the traditional and more formal planning processes to address these inter-related challenges in a holistic manner. The process involves a high degree of participation to identify vision, objectives and implementable strategies.

JOCHEN GAULY, URBAN PLANNING GERMANY

“ Cities need to be seen as a complex dynamic system of interconnected spatial, social, economic sub systems. We can’t address issues of mobility, water, waste, health, environment, or heritage in silos. We developed an integrated ‘Liveable Urbanism’ approach and methodology to study and analyze the city of Kochi and used the evidence from our research to propose comprehensive urban strategies and solutions.

DR. SHIBU RAMAN, CARDIFF UNIVERSITY, UK

“ The Agri-Park Policy in South Africa is an example of integrated strategy combining skill development, infrastructure optimization, business analysis with spatial development plans.

DR. TATHGATHA CHATTERJI, XIM UNIVERSITY, ODISHA

06.

Having a unified digital land cadastral map is imperative to enable effective urban planning.

“ The GIS based mapping initiative under AMRUT mission provides an impetus to cities to adopt GIS technology to prepare and maintain city level plans and databases.

MOHAMMED MONIS KHAN, MoHUA, GOVERNMENT OF INDIA

“ Drone technology has made it possible to acquire high resolution images to prepare an accurate base-map to overlay and reconcile the land cadastre on GIS.

DR. HARSHUL PARIKH, FACILE MAVEN, GUJARAT

07.

Creating, updating and monitoring a database of data and indicators is critical to monitor progress and impact of urban plans and strategies.

“ A common problem with all development plans is the total lack of monitoring and evaluation. It is important to continuously monitor situation on ground and take corrective measures periodically. Planning authorities don't view monitoring as a critical aspect.

VIDYADHAR PHATAK, FORMER CHIEF TOWN PLANNER, MMRDA, MAHARASHTRA

“ We need to build up an open data repository for different sector for Kochi that allows us to monitor our progress. It can serve multiple objectives of informing citizens, advancing evidence based research and performance improvement.

DR. RAJAN CHEDAMBATH, C-HED, KERALA



Encouraging Sustainable Infrastructure Solutions

Rethinking Urban Infrastructure in the Era of Climate Change

Cities are high-productivity areas. They thrive on concentration of residents and their ability to interact and connect with each other at various levels. 'Network infrastructure' such as roads, water supply, sewage disposal, public transport make these interactions possible. Infrastructure prepares land for urban functions, guides development and fosters private investment. Providing infrastructure is the most fundamental of public investment actions that ensures that cities remain healthy, productive, and attractive to residents as well as business and investors.

In the view of the pandemic and emerging threats like climate variability, there is a need to focus on sustainable nature-based solutions for flood mitigation, urban water management, development of blue green infrastructure. Cities throughout the world are redefining their approach to Nature-based Solutions as a more sustainable means of delivering urban services. These are strategies that apply natural processes and entities for the provision of urban infrastructure services like stormwater management, wastewater, and sludge treatment etc. It entails the protection, management, or creation of natural ecosystems that have a positive impact on environmental quality.

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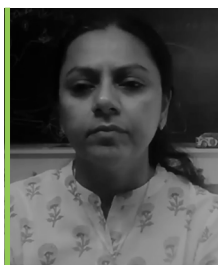
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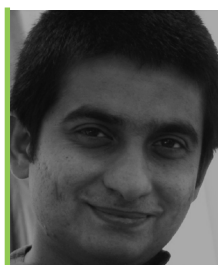
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01.

Cities are facing more frequent environmental stresses and shocks like floods, inundations, and heatwaves. As cities become more vulnerable to climate change, there is an increased need to integrate ecological assets in city planning.

“ In 2005, when the Tsunami hit, areas around Kochi were affected significantly, but Kochi's canals and backwater systems absorbed most of the water, causing little harm to the city. However, 2018 and 2019 saw the worst instances of urban flooding in Kochi because our canals and backwaters have since been ignored in the planning process.

DR. RAJAN CHEMDAMBATH, C-HED, KERALA

“ Lack of access to basic services in informal settlements often results in waste being directly disposed in water bodies. We must address sustainability by giving rights to the poor. By recognizing their rights, we can encourage and invite better investments for development of required infrastructure.

DR. D.THARA, MoHUA, GOVERNMENT OF INDIA

“ We have noticed that while planning resettlement colonies in Delhi, water bodies tend to be ignored if they are deemed to have no utilitarian and monetary value.

SHUBHAM MISHRA, URBAN NARRATIVES, DELHI

“ Metropolitan development authorities must anticipate and make provisions for future growth of cities in a way that surrounding natural assets are preserved.

SOURAV KUMAR BISWAS, GEOADAPTIVE, USA

02.

Sustainable urban infrastructure practices can become mainstream by integrating them in statutory planning processes and regulations.

“ A basket of solutions is required to cater to the various challenges of sustainable infrastructure. Statutory plans must include an ecological layer which identifies large tracts of ‘No-Go areas’ which should be zealously protected from depletion.

SHUBHAM MISHRA, URBAN NARRATIVES, DELHI

“ Singapore’s green cover has increased from 36% to 52% using two interesting building regulation tools. Green Plot Ratio (GnPR), an objective measure of the density of green within a site, is used to ensure green cover at the minimum plot level. Secondly, Landscape for Urban Spaces and High Rises (LUSH) provides schematic ideas to insert green cover in public and private spaces.

DR. SASWAT BANDHYOPADHYAY, CEPT UNIVERSITY, GUJARAT

“ In Berlin, increased awareness of the detrimental effects of climate change led to the changes in legislative policies and integration of blue-green infrastructure into the statutory plans 10 years ago. Over time, innovative measures to reduce pressure on the sewer systems and preventing damages due to urban flooding have been implemented, especially in newer developments.

KATHARINA LINDSCHULTE, BGMR LANDSCHAFTSARCHITEKTEN GmbH, GERMANY

“ Developing guidelines and indicators for national and global level certifications, can help orient different city actors and other stakeholders to adapt sustainable solutions in local contexts.

LORENA ZEMP, GIB FOUNDATION, SWITZERLAND

03.

Nature-based Solutions have emerged as a great way to address the limitations of grey infrastructure and invest in solutions that do not compromise the ecological landscapes of cities.

“ *Nature-based Solutions are a broad set of strategies to prevent climate disasters and adapt to changing ecologies. Through structural (built interventions) and non-structural (policy and regulations) strategies, Nature-based Solutions can be successfully implemented to manage and improve stormwater collection*

TUSHAR BOSE, CEPT UNIVERSITY, GUJARAT

“ *Replacing natural ground cover with impervious built-up cover alters hydrological cycles wherein we have higher levels of water runoff and less infiltration. Grey stormwater infrastructure serves to direct water away from the ground into canals and rivers exacerbating urban flooding. A paradigm shift is required in our approach to manage flooding by introducing green or hybrid grey-green infrastructure. Integrating existing blue-green systems allows water to flow through these landscapes before entering the grey stormwater systems.*

SOURAV BISWAS, GEOADAPTIVE, USA

“ *It is important to consider the social effects of Nature-based solutions. Nature-based Solutions contributes to increased real-estate value which may present a risk of gentrification. Solutions must be conceptualized such that no groups of people are left vulnerable due to their implementation.*

LORENA ZEMP, GIB FOUNDATION, SWITZERLAND

04.

The idea of risk informed urban planning is gaining traction as an instrument of integrating environmental concerns with spatial development.

“ Citizens expect a certain level of safety and security from the cities they reside in. Access to basic services and infrastructure for water, sanitation, etc. is an important security concern for citizens. In recent times, preparedness and management of disasters has also become a primary safety concern. Cities need to be able to provide basic services to its citizens during conditions of extreme events. Disaster Risk Management is increasingly gaining relevance as an urban planning component due to its spatial dimension.

GEORG JAHNSEN, GIZ DELHI

“ Many cities across the world are now assessing climate change related risks that they are facing and using it to inform decision making. The City of Norfolk, a West Virginian coastal city identifies, in its city land use plan, high to low risk areas based on their vulnerability to flooding.

SASWAT BANDHYOPADHYAY, CEPT UNIVERSITY, GUJARAT

“ Urban infrastructure must be looked at differently. They are not just a big sector with billions of dollars of investment, but also systems that have the opportunity to provide reliable and sound services to the citizens. The success of infrastructure does not depend on its structural strength, but on its reliability for people. We must conceptualize an integrated infrastructure service delivery system and use them as drivers for resilient spatial planning.

KAMAL KISHORE, NDMA, GOVERNMENT OF INDIA

05.

Planning sustainable infrastructure requires a strategic approach to scale from short-term neighbourhood solutions to restructuring city-wide networks.

“ *Small, easy-to-implement pilot initiatives are key to demonstrate the benefits of Nature-based Solutions to development authorities, government bodies, as well as local communities. This encourages mobilization of resources required to scale such initiatives.*

ANAL KAPADIA, LIVING ROOTS ENVIRONMENTAL DESIGN
STUDIO, GUJARAT

“ *Nature-based Solutions such as sponge infrastructure can be envisioned in three broad stages. In the short term small-scale projects must be implemented at the street or neighbourhood level. In the medium term, areas around the project must be opened up and activated for public use. Lastly, in the long term, the project value can be used to trigger newer forms of development.*

SOURAV BISWAS, GEOADAPTIVE, USA

06.

A city-wide inventory of important ecological assets and conditions can help planners and developers make informed decisions regarding new construction.

“ *Institutional frameworks to prepare and revise city plans must have mechanisms to form databases of local knowledge on available natural resources, soil and water conditions, land use and their sustainable usage through intense community engagement.*

AJAY SURI, NATIONAL INSTITUTE OF URBAN AFFAIRS, DELHI

07.

Building capacities of local governments and fostering inter-sectoral coordination is essential to successfully implement complex sustainable infrastructure projects.

“ *The problems and complexities of India are starkly different from the rest of the world. Solving these challenges requires capacity building and collaborations. As urban practitioners, academics, and think-tanks, our role is to work with local governments and city actors to support them with the right tools to conceptualize and implement sustainable infrastructure projects.*

HITESH VAIDYA, NIUA, DELHI

“ *Governance, at the moment, is highly fragmented and divided. There is a multiplicity of agencies and stakeholders involved. Coordination among these various actors is crucial to realize complex sustainable infrastructure projects on ground.*

CHRISTOPHE WOIWODE, IIT MADRAS, TAMIL NADU

“ *To make green infrastructure bankable, people of different expertise need to come together to innovate and implement sustainable solutions. This has happened successfully in developed countries like Copenhagen with their Cloudburst Model, Singapore's ABC Water program, and China's Sponge City Model.*

SOURAV BISWAS, GEOADAPTIVE, USA

“ *It is crucial to combine all the aspects of the urban sector together in order to make sustainable infrastructure practices more relevant. Extensive capacity building among various sectors is required to shift from a two-dimensional to a multidimensional approach to address the complexities of the issues we face today.*

DR. ALEXANDER JACHNOW, ERASMUS UNIVERSITY, ROTTERDAM

OUTREACH AND IMPACT

The events under the SUD-SC project saw participation and contribution from a wide range of professionals from across the globe. Over 1500 participants and 94 speakers and contributors were connected digitally fostering new avenues for collaborations. Participants represented public sector, private sector, NGOs, students and academia, research and think tanks.

1500+

Total reach

94

Speakers and contributors

248

Cities represented

269

Reach through
trainings and capacity
building

305

Reach through
policy roundtables

1010

Reach through
international
symposium

Organization and Gender Representation



Organizational Representation



Gender Representation

List of selected participating organizations in policy discussions and trainings

Academia and Research

1. Institute for Housing and Urban Development Studies, Erasmus University Rotterdam
2. Lincoln Institute of Land Policy, Massachusetts
3. University of Cape Town
4. World Resources Institute, India
5. University of Witwatersand, Johannesburg
6. Center for Policy Research
7. National Institute of Urban Affairs

Private Sector

1. IBI Group
2. GeoAdaptive
3. IIFL Home Finance
4. CRISIL
5. PWC
6. HCP Architects
7. KPMG
8. P.K. Das and Associates
9. Ernst & Young LLP
10. Facile Maven Pvt. Ltd.

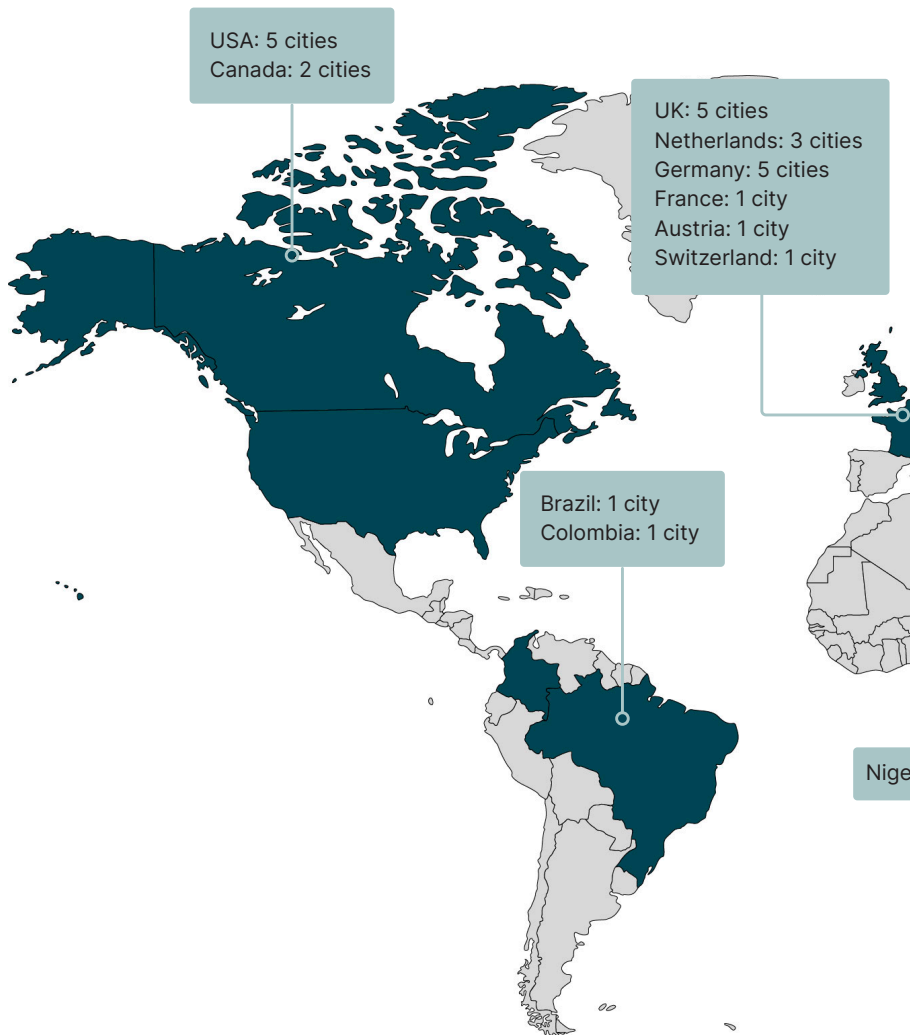
Public Sector

1. Government of Odisha
2. Government of Tamil Nadu
3. Government of Kerala
4. Government of Gujarat
5. Western Cape Govt.
6. HUDCO, India
7. NITI Ayog, India
8. Ahmedabad Urban Development Authority
9. Bhubanewar Municipal Corporation
10. Chennai Smart Cities Limited

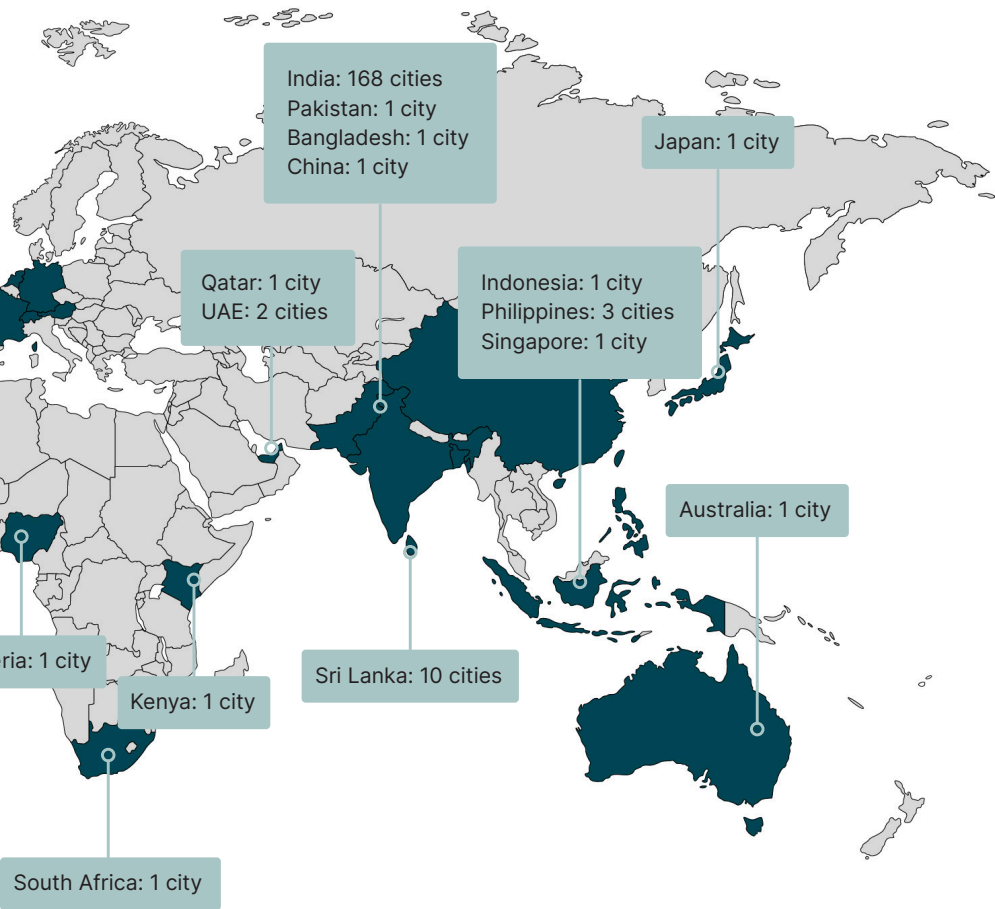
NGO and other organizations

1. The World Bank
2. Cities Alliance, South America
3. Development Action Group, Cape Town
4. Janagraaha
5. Bloomberg Philanthropies
6. Indian Housing Federation
7. Asian Development Bank

Geographical Representation



Participants and speakers from 248 global cities were a part of the events of the SUD-SC projects. India represented the highest number of cities, followed by Sri Lanka and UK, Germany and USA.



Feedback from Contributors and Participants

“

The collaboration with world class academic institutions like CEPT University in Ahmedabad under the GIZ supported SUD-SC Project brought exchange within the partner-landscape and the technical discourse to a completely different level enabling innovation and positive changes in sustainable urban development.

Georg Jahnsen

GIZ, India



“

I congratulate CEPT and GIZ on coming up with these valuable learning and knowledge products. I hope these materials will be accessible to a large number of audiences. NIUA, as a national level think-tank institute, will extend full support to the organizations in similar future endeavours.

Hitesh Vaidya

NIUA, India



“

No global issue can be solved without India because of the multidimensional challenges that the country faces today. India can also lead the way to demonstrate how we can successfully manage big cities.

Walter J. Lindner

Ambassador to India, Embassy of Germany



“

I'm very happy that training programs are being conducted in Kerala with support from GIZ and CEPT university in partnership with C-HED, Kerala. These programs are very relevant considering the current urban development scenario of India, and specifically Kerala. CEPT is one of the finest schools in India, and their support in conceptualizing and organizing these programs is invaluable

Adv. M. AnilKumar

Mayor, Kochi



“

It was my pleasure to be part of one of the panel discussions contributing to the fundamental questions of how we can react to or even prevent the massive effects of local and global crisis – black swan events. Resilience is the new buzz-topic, next to sustainability - both being equally important as means to prevent, heal and change! I thank CEPT University and GIZ for arranging this event.

Andrea Schwappach

Frankfurt City Planning Office, Germany





“

I enjoyed the Fireside Chat very much and look forward to the unfolding of the science/architecture-policy interface. I am glad this program has given us the opportunity for future collaborations with CRDF and other organizations.

Karl- Heinz Gaudry Sada

GIZ, Germany

“

I must compliment CEPT university and CRDF for collaborating with GIZ India in putting together this package which is both rich in content and relevance. This is a crucial subject for planners as well as every citizen of India concerned about the direction in which cities are headed.

CK Koshy

CRDF, India



“

I was impressed by the diversity of the participants and different approaches they brought forth. The contributions by Mr. Rafael Tuts on the UN-Habitat Report on Cities and Pandemics, Mr. Avanish Pendharkar on the need to rethink urban planning, and Dr. Saswat Bandyopadhyay on nature-based solutions in cities were extremely insightful.

Joachim Eckhard

Former Head of Planning, Frankfurt Stadd, Germany

“

The programs were really interesting and fruitful. My colleagues, students and I myself have gained immense insights on sustainable urban development from these events.

Dr. Dong Wei

Southeast University, China



Feedback from Other Audiences

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The presentation on ‘Making Planning Work in India’ by Dr. Bimal Patel was very insightful. Knowing the country’s economic strata, there is a need for standards to make work easier rather than creating a barrier to affordability. Standards in India are created based on notions than reality of measurable calibrations.

“

Congratulations to the team for the successful launch of the SUKALP platform. It will be a useful tool for knowledge exchange, building capacities and creating synergies on urban planning concepts in India.

“

The views expressed in the governance section were pertinent. The issue still remains that the structure of governance and capacities of various government institutions like ULBs has not changed or improved over the years; the issue is not a lack of technical experts in the area, but rather the scope of how and how much they can put in.

GIZ TEAM

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Charlotte Pusch
Aparna Das
Arpan Mazumder
Yogita Lokhande
Nishant Bhatnagar
Deeptha Jayakar
Bibhu Prasad Tripathy
Vijaya V

CRDF TEAM

Dr. Saswat Bandyopadhyay
Avanish Pendharkar
CK Koshy
Darshan Parikh
Dr. Sejal Patel
Tushar Bose
Utkarsh Patel
Priyankita Pant
Rohit Raina
Vijaya Salanke
Mohit Kapoor
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AND DEVELOPMENT
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CEPT
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