

Regional Policy Dialogues on

“Making Liveable Cities: Challenges and Way Forward for India”



**February - October,
2018**

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Background: “Making Liveable Cities”

In order to address urban policy and planning at the global level, the United Nations (UN) has enlisted the Sustainable Development Goal (SDG) 11 to make cities and settlements inclusive, safe, resilient and sustainable, and the UN Conference Habitat III has adopted a New Urban Agenda to address the challenges of urbanisation and endeavour to achieve SDG 11. The Ninth Session of the World Urban Forum (WUF9) that recently concluded under the broad rubric of ‘Cities 2030, Cities for all’ identifies key enablers for urban transformation, such as strengthening local urban governance, building inclusive partnerships, encouraging innovative solutions, adopting integrated urban planning approach for sustainable development, and deploying monitoring and reporting mechanisms for effective policy making.

India is party to these global commitments and the AMRUT and the Smart Cities Mission have similar objectives. The basic aim of these schemes is to recast the urban landscape of the country to make urban areas liveable, sustainable, smart and inclusive while driving the economic growth of the country. However, the Missions are intended to enable around 500 cities to become sustainable and India has almost 8000 cities. So the question remains as to how the cities that are not in the favoured list of 500 develop a vision for their future to move towards a resilient and sustainable path. In this context, the Regional Policy Dialogues on ‘Making Liveable Cities’ were announced at the Thematic Track on the same theme at the World Sustainable Development Summit (WSDS), February 2018. The dialogues are being organised by TERI at an opportune policy juncture with support from the Royal Embassy of Denmark, India, and International Urban Cooperation, funded by European Union, in different cities in India in the upcoming months.

The dialogues would focus on ways and means for holistic and long-term urban planning in India, in line with the SDGs and the New Urban Agenda. They would also have discussions on strengthening and empowering local urban governance for making cities liveable.

The objectives of the policy dialogues are to:

- Understand the implications of SDG11, New Urban Agenda and Kuala Lumpur Declaration for Indian cities and discuss how the cities can aim to achieve and monitor progress on the goals and targets
- Recognize the challenges and enablers of making liveable cities and explore the extent of impact of sustainable urbanization processes in the existing urban missions
- Identify the potential partnership and implementation mechanisms in the context of making liveable cities that are smart, resilient and sustainable
- Promote the empowerment of Indian cities in terms of their policy mandate, institutional and financial support, and legal provisions
- Mainstream awareness about the sustainable urbanization processes and share knowledge between the national and city level and to other cities

Southern Region Policy Dialogue

(a) **Setting the Context: Urban Planning & Governance for Liveable Cities**

Overview of the Regional Policy Dialogues

Ms. Raina Singh, Area Convenor, TERI, provided the background and structure for the Regional Policy Dialogues. She highlighted the context of the Global Urban Agenda 2030 for achieving sustainable urban development and the importance of the New Urban Agenda and other initiatives such as the Kuala Lumpur Declaration 2018 to achieve the targets of SDG 11. The urban missions of India are in line with these global goals and focus on provide basic infrastructure to all citizens, quality of life, a clean and sustainable environment, and creating 'light houses' of replicable models.

She further elaborated upon the features that make a city 'liveable' such as emphasis on a high quality of life – with focus on social and cultural aspects, the significance of a sustainable environment, the presence of a competitive economy for achieving economic security and effective and participatory governance. The government of India has recently launched the 'Ease of Living' Index which is an indicator for determining the level of liveability in Indian cities.

After introducing the themes, objectives and outcomes of the Regional Policy Dialogues which are driven by the cities, it was mentioned that the major output of the dialogues would be the National Policy Brief which is being released at the National Workshop in New Delhi. In the Southern Region, the discussions revolved around how urban planning and governance systems can be improved upon to enhance liveability in cities.

Strengthening governance & finance mechanisms and capacity-building

Dr Ajay Mathur, Director General, The Energy and Resources Institute (TERI)

Dr. Mathur highlighted that there is now an increasing emphasis on the liveability of urban areas. The more liveable a city is, the higher the talent and investment it would attract. Various states and cities in the Southern region, especially the new capital city of Amaravati considers liveability as a key concern for the development of the city. The evaluation of the cities in terms of their quality and performance needs to be done continuously to maintain an increasing GDP of the country and reach global goals of reducing GHG emissions and towards sustainable development.

A relevant aspect is then to address the issues of the cities and mainstream these in urban planning. There is a need to move beyond physical planning and infrastructure development and have a higher emphasis on acquiring robust governance mechanisms, finance and capacities. The Regional Policy Dialogues aim to address the key challenges and game changing action points to be addressed across various regions of India. The outputs of these dialogues would also be shared with the Ministry of Housing and Urban Affairs for further action.

City-to-city partnerships

Mr Panagiotis Karamanos, Team Leader, International Urban Cooperation (IUC)/India

Mr. Karamanos emphasized the importance of cooperation between cities. Such cooperation can support the exchange of ideas and best practices which can contribute towards enhancing the liveability of cities. In line with this idea, the IUC is mainly focusing on two components: Indian-EU city-to-city Pairings which emphasizes the need for partnerships between cities to develop their capacities; and Climate adaptation & creating the Global Covenant of Mayors for effective climate action in the cities. The city pairings conducted by the IUC as well as the development of climate change action plans along with partner cities is supported by the European Union. The role of Indian governance is highly significant in supporting the urbanization occurring in Indian cities.

Importance of Urban Local Bodies (ULBs) for making liveable cities

Shri Ajay Jain, IAS, Principal Secretary - Energy, Infrastructure & Investment Department, Government of Andhra Pradesh

In order to bring about improvement in urban areas, Shri Jain stressed that more focus and power should be provided to ULBs to implement changes, especially funding should be made available. As more and more people are moving from rural to urban areas, it is important to get Mayors of Indian cities involved and play a bigger role in development. In Andhra Pradesh, Vijayawada has been ranked 9th in the Ease of Living Index by the government of India. So, to further enhance the liveability of cities, recommendations are needed to bring about improvements and acquire funding for maintenance of the cities.

Liveability includes an amalgamation of factors that would bring about improvement in a city. For instance, physical infrastructure needs to be considered and improved upon which consists of proper drainage, housing for all and providing services that are of good quality as well as affordable. It also includes the transport systems and connectivity to other cities, such as functional airports, railways, bus stations, or the entry and exit points of a city. Another important aspect is the social infrastructure, such as the education, health facilities, hospitality systems and public spaces. The environment and sustainability is also equally significant, especially for an already planned or brown field city as they pose higher challenges. The advantage of a green field city, such as Amaravati capital city, is that it can be planned based on needs and requirements of the people. The governance of a city is also a significant factor as the ease of accessing government and municipal services, the role of IT and citizen engagement would determine the economic growth of the city.

(b) Status of Urban Missions, Capacities and Partnerships in Southern Region

TERI presented the status of the states and union territory in the Southern region - Andhra Pradesh, Telangana, Pondicherry, Kerala, Tamil Nadu, Odisha, Chhattisgarh and Puducherry based on the 5 sub-themes mentioned below:

- Urban Policy and Planning for Liveability
- Strengthening Local Urban Governance Institutions
- Strengthening Partnerships
- Financing and Implementation
- Technical Innovation in City Context

The urban planning and development mechanisms that are mostly followed by the country are master plans and town planning schemes at the city level, urban development schemes and missions at the state and national level and through international partnerships and funding. The statuses of the states and union territory was derived from the centrally sponsored missions of Atal Mission for Rejuvenation and Urban Transformation (AMRUT), Smart Cities Mission (SCM), Pradhan Mantri Awas Yojana-Urban (PMAY-U), Swachh Bharat Mission-Urban (SBM-U), National Urban Livelihoods Mission (NULM), Heritage City Development and Augmentation Yojana (HRIDAY).

In terms of the Urban Policy & Planning Framework, the Smart Cities Mission, AMRUT, SBM-U and PMAY-U are functional in all the areas and HRIDAY is being implemented in only five of the states. Regarding the financing and implementation mechanisms, Andhra Pradesh has the highest proposed investment of 46149.99 crores in its Smart City Proposal. Under the Smart Cities Mission, various technical and innovative solutions have also been initiated to address issues of mobility, drainage, infrastructure, solid waste management and safety and security of the citizens. Some cities in the Southern Region have also engaged in city-to-city partnerships such as Vijayawada is being paired with Hamburg, Germany, by IUC to address urban mobility and safe and inclusive urban development, and similarly, Kochi is being paired with Vilnius in Lithuania, and Chennai with Métropole Clermont Auvergne in France.



The institutional framework was also discussed to identify the responsible public bodies and authorities at the national, state and city level, that support the sustainable urban development of cities in the Southern Region.

Figure 1: Shri Ajay Jain, Principal Secretary - Energy, Infrastructure & Investment Department, Govt. of Andhra Pradesh, in discussion with Mr Panagiotis Karamanos, Team Leader, IUC/India

Rebuilding a city to enhance its liveability

Dr Sreedhar Cherukuri, Commissioner, Andhra Pradesh Capital Region Development Authority (APCRDA)

Dr. Cherukuri highlighted how Amaravati capital city is an attempt to build a new city that has three basic principles to acquire sustainable urban development – innovation, liveability and happiness. Cities of the past were built on a typical growth strategy, so in the case of Amaravati city, the government is conceptualizing based on the innovation of the systems that would be present in the cities to meet the needs of the people. The participation of citizens has been brought to the forefront to address their actual and not just perceived requirements. The city planning has been done in such a manner to allow more social interactions between people and bring them closer to their friends and family wherein their materialistic needs are met along with maintaining their overall wellbeing.



Figure 2: Dr. Sreedhar Cherukuri, Commissioner, APCRDA, and Mr Panagiotis Karamanos addressing the audience during the group discussion

While addressing questions from the audience, Dr. Cherukuri added that there is a lot of focus on social infrastructure to achieve liveability in Amaravati city and the government is working with multiple partners for the same. He mentioned that the planning framework should be made known to people and they should be actively involved in measuring the liveability of the city by being made aware of the local area plans and the finance mechanisms being implemented. He further added that open, green and inclusive spaces are important components of liveable cities, and that the services provided should be affordable and available so that it is a comfortable city for all citizens.

(c) Activities & Key Takeaways for the National Policy Brief

Key Outputs from Individual Activity

An activity sheet (Refer to Annexure II) was circulated amongst the participants to gauge the levels of priority they gave to the different sub-themes identified in the dialogues as well as the different aspects of the theme of 'Urban Planning and Governance' for the Southern Region. The aspects of the theme were – 1) Institutions; 2) Policies, Laws & Regulations; 3) Stakeholder & Community Participation; 4) Technical & Financial Capacities; and 5) Data Management & E-Governance. We posed questions related to the actions and the responsible stakeholders that the states would involve for implementing policies. We also asked participants to elaborate on any policies that exist in their cities to enhance liveability along with any constraints that they face in implementing the same.

Amongst the responses for the activity sheet (Refer to Figure 3), the aspects of Policies, Laws & Regulations and Data Management & E-governance received the most amount of either high or medium priority for achieving effective urban governance, with more than 50 % of the respondents giving high priority to the latter aspect. This could have its basis on the emphasis on e-governance in the Smart Cities Mission which contributes towards higher transparency and accountability in urban governance. The other three aspects such as Institutions and Stakeholder & Community Participation were given a similar range of priority to each other, and none of the aspects were absolute low priority for all the respondents.

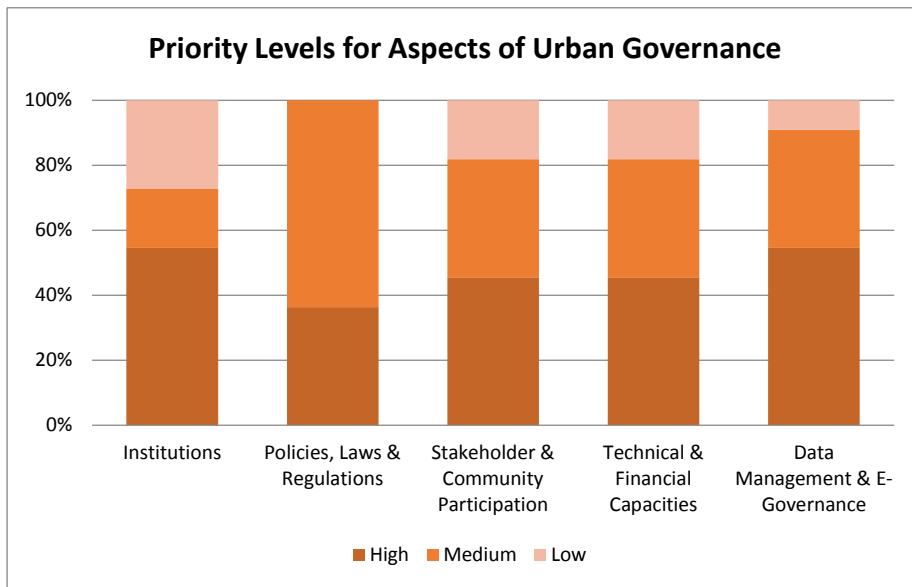


Figure 3: Aspects of Urban Governance for Liveable Cities

In terms of the influence levels of the enablers of urban governance and also the sub-themes of the dialogues, the respondents gave the highest priority to Strengthening Local Urban Governance (more than 70% of the respondents). Capacity building of ULBs is a significant factor in ensuring that decision and policy making processes are implemented effectively. Strengthening Partnerships was given the next level of priority, with more than 60% of the respondents giving it Medium priority, as collaborations and partnerships between different stakeholders ensures the continued implementation of decisions made by the ULBs. The other enablers of Urban Policy & Planning, Financing & Implementation, and Technical Innovation received similar responses of priority levels between each other, demonstrating that these enablers are interconnected and need to be present to ensure implementation.

In terms of actions needed for implementation, many respondents highlighted the need for capacity building of ULBs along with engagement with stakeholders to ensure effective community participation. To support this action, the respondents also suggested having e-governance systems and technological innovation mechanisms in place to facilitate a sustainable and long-term mandate for urban planning. Another relevant action was the awareness of citizens of the planning norms being implemented as well as the monitoring and evaluation of the plans and programmes by beneficiaries to ensure that they are addressing the needs of the citizens. To this end, the respondents identified four levels of responsible stakeholders that can fulfil the actions needed for implementation – the citizens/public, the NGOs/social groups or institutions, the ULBs/municipal administration, and the state government bodies.

One of the respondents from Vishakhapatnam mentioned four policies being implemented in Andhra Pradesh – the Urban Sanitation policy for addressing solid and liquid waste management; the Urban Transport policy for addressing safety and feasibility of transport; the Mosquito & Breeding Act for addressing public health; and the Urban Housing policy, also known as the NTR Gruha Nirmana Padakam for providing housing. Apart from these policies, another respondent mentioned that the urban policies of the Southern Region have been focused on performance indicators monitoring and understanding the implications of ICT in the Region.

Some of the major constraints emphasized by the respondents are lack of financial resources or funding along with lack of innovative technology and technical expertise. A respondent suggested that funds can be raised through municipal bonds. Low awareness amongst citizens was another set of constraints along with the low participation of citizens and communities in decision-making processes. Capacity building and the need for effective governance and technical bodies were mentioned as factors required for addressing the constraints of the Region.

Group Exercise

The participants were provided with matrix charts (Refer to Annexure III) to elucidate upon the existing challenges faced by the cities in the Southern Region and the recommendations and good practices that address these challenges. A moderator was assigned to each group and a group representative was identified who presented the outputs of the group at the end of the activity. Each of the sub-themes and aspects of urban governance were discussed in detail to identify solutions that can enhance liveability of cities.

Groups:

- Urban Policy and Planning, Moderated by – Riya Rahiman, TERI
- Local Urban Governance, Moderated by – Raina Singh, TERI
- Financing and Implementation, Moderated by – Panagiotis Karamanos, IUC
- Technical Innovation, Moderated by – Yashwanth Kumar, TERI
- Partnerships, Moderated by – Ashish Verma, IUC

Key Outputs from the Group Exercise

Existing Challenges

- **Urban Policy and Planning**

With existing top-down approaches, inadequate capacity with respect to quality of services, technological advancement as well as inter-departmental coordination was a recurring challenge. Due to lack of contextualization of policies, adaptation is difficult, and it requires more research for effective urban practice. For the autonomy of cities and ULBS, more enforcement abilities are needed to improve planning mechanisms at the local level. There is also lack of inclusivity and awareness among citizens, which is coupled with low presence of skilled labourers and inaccessible services. Moreover, there is lack of qualitative data as data is left unrecorded and is not institutionalized for effective use.

- **Local Urban Governance**

Due to the presence of multiple agencies and complex institutional structures, there are issues in implementation and coordination as well as accountability. There is a need for skilled staff for the understanding of policies and to formulate and implement them. Furthermore, citizens and other social groups are also unable to understand and interpret policies accurately which leads to improper enforcement. So, there is a need for facilitating and incentivizing participation amongst citizens corroborated with ensuring that policies are detailed out in an approachable manner and translated to local languages. There is a further lack of proper financing, tools and technology and the skill required amongst staff to utilize the technology properly. Data systems are also not effectively utilized and there is low data recording due to which only scattered data is available.

- **Financing and Implementation Mechanisms**

There is a lack in continuity and adequacy of funds as well as a low capacity to collect taxes. Due to complex policies, there is a need for inclusivity of relevant stakeholders such as NGOs, institutions, citizens and political entities. For the safety of data, an issue is the transparency of data and the monitoring of data management.

- **Technical Innovation**

Due to complexity in processes of institutions, there is a need for online presence of institutions, especially to ensure cash less transactions. Policies are not advancing with the progress of technology and a lot of the innovations and technology are not user-friendly or accessible to the citizens. Due to low public safety and crime control, there is a further distrust of government bodies amongst citizens. There are further issues in technical and financial viability due to low revenue generation in the Region by the government, and an added issue is that financial resources are mostly focused on urban issues not allowing for equitable development. There is also a high dependence on MNCs

for development, which stresses the need for higher indigenous resources and innovations to be utilized.

○ **Strengthening Partnerships**

There is a lack of resources for the enactment of the existing institutions. There is also low flexibility to integrate the policies of the national and international institutions with the objectives of the ULBs. Another challenge is the identification and involvement of the local communities. There is a need for skilled persons and technical capacities in organizations and there is also a lack in monitoring of performance indicators.



Figure 4: *Deliberations amongst groups during the Group Exercise activity in Vijayawada*

Recommendations and Good Practices

○ **Urban Policy and Planning**

A nodal department for inter-departmental coordination would be useful to ensure the review and monitoring of institutions. Incentivizing stakeholders and institutionalizing citizen engagement will help bring out reforms in urban governance. Innovative approaches for revenue generation should be adopted for revenue generation such as integrating technology, data repositories, inventories and use of social media. A special data infrastructure act can be put in place, which along with awareness building (possibly through academic curriculum) would ensure effective data management and e-governance.

○ **Local Urban Governance**

A single point of contact for all agencies should be present, corroborated with a clear mandate/manifest for the institutions. Training should be provided to the resource persons in the institutions. Local and simple language should be utilized for policy-making for higher awareness of the policies. And funding incentives should be provided for implementation of policies. If there is a good track record of effective implementation, then these can be highlighted to encourage participation and ownership. Awareness can also be generated through localised and contextualized communication with the help of social media, mobile apps, etc. Technology should be upgraded which should move along with continued and inclusive training of people. Accessibility to a centralized data repository is required, along with simplified data systems and training of staff to ensure effective implementation.

○ **Financing and Implementation Mechanisms**

Policies should be simple and understandable to ensure model independence and there should be a creation of tax-conscious employment generation. Regular interactions with citizens are required to ensure their inclusivity. Digitization of resources are also required such as account digitization and e-financial centres. Moreover, collaborating with institutions for monitoring and evaluation is a relevant aspect.

○ **Technical Innovation**

In institutions and governance, technology-driven processes will help in effective implementation of policies as well as in monitoring crime and maintaining safety. A specific department or government body should look after handling innovative technology and disseminating knowledge about it. There is a need for de-politicizing policies for monitoring implementation to ensure transparency and accountability. Utilization of technology and innovative service delivery such as GIS or in property tax collection will help in better financial recovery. Integrated data centres are also significant, such as the SMART city control and command centres.

○ **Strengthening Partnerships**

The engagement of and integration with research institutions will help in capacity building and implementation. Governments should be liberalized to easily form international partnerships, as such partnerships can help in developing innovative policies. Stakeholder and community participation should be done at the local level for proper implementation. It is important to have higher internal capacity building and CSR, for which public-private partnerships can be encouraged and external consulting organizations can be hired for training. Moreover, evaluation of performance indicators is required to ensure that rankings of cities in international development indexes remain high.

Western Region Policy Dialogue

(a) Setting the Context: Infrastructure Development for Liveable Cities



Figure 5: Inaugural Session speakers for the Western Regional Policy Dialogue
L-R: Ms Raina Singh, Mr Sanjay Seth, Shri Sidharth Kuncalienkar, Shri Swayandipta Pal Chaudhuri, Mr Ashish Verma

Overview of the Regional Policy Dialogues

Ms. Raina Singh, Area Convenor, TERI, provided the background and structure for the Regional Policy Dialogues. She highlighted the context of the Global Urban Agenda 2030 for achieving sustainable urban development and the importance of the New Urban Agenda and other initiatives such as the Kuala Lumpur Declaration 2018 to achieve the targets of SDG 11. The urban missions of India are in line with these global goals and focus on provide basic infrastructure to all citizens, quality of life, a clean and sustainable environment, and creating 'light houses' of replicable models.

She further elaborated upon the features that make a city 'liveable' such as emphasis on a high quality of life – with focus on social and cultural aspects, the significance of a sustainable environment, the presence of a competitive economy for achieving economic security and effective and participatory governance. The government of India has recently launched the 'Ease of Living' Index which is an indicator for determining the level of liveability in Indian cities.

After introducing the themes, objectives and outcomes of the Regional Policy Dialogues which are driven by the cities, it was mentioned that the major output of the dialogues would be the National Policy Brief which is being released at the National Workshop in New Delhi. In the Western Region, the discussions revolved around how infrastructure development can be focused upon to enhance liveability in cities.

Visions of Planned Urban Growth

Mr Sanjay Seth, Senior Director, Sustainable Habitat Program, TERI

Mr. Seth initiated the welcome remarks by thanking the dignitaries of Imagine Panaji Smart City Development Organization, Mr. Sidharth Kuncalienkar, the Honourable Mayor and Chairman EDC Limited and all other distinguished participants for attending the western regional policy dialogues with the theme of Infrastructure Development for liveable cities. He further added by stating cities are facing tremendous pressures on their civic infrastructure such as water supply, sewerage, drainage, and solid waste management; and in order to combat these issues, the Government of India has launched various programmes and schemes. The MoHUA with its Ease of Living index attempts to analyse the state of liveability in Indian cities. The Regional Policy Dialogues is thus a significant platform to understand the challenges faced in the Western region.

Role of IUC for strengthening partnerships

Mr Ashish Verma, Urban Expert, International Urban Cooperation/India

The cities are consistently undergoing dynamic changes that urban authorities are struggling to cope with. In order to find solutions to challenges faced by urban areas with respect to energy, water, health, transport and housing facilities, the European Union launched the International Urban Cooperation (IUC) programme in which European cities will be linked with other cities and regions to share knowledge and solutions.

Mr. Verma discussed about the role of partnerships by describing about the IUC partnership programme in India. He highlighted that with a total budget of 20 million euros, the international programme will be implemented in Asia and America supporting all the main urban and climate agendas such as the SDGs, Paris agreement etc. The role of IUC programme is to support cities to promote smart, green and inclusive growth, and fostering better ways to plan, finance, develop, govern and manage cities. He further elaborated on the partnership mechanism between an Indian city and its international partner city. He described that through these partnerships IUC is helping cities to come up with policy-level interventions, technology interventions and financial mechanisms. The output of the partnership will be in the form of joint action plans. He further described Panaji's partnership with Dubrovnik and the key focus areas of the cities will be solid waste management, mobility and smart cities. The action plan will further identify the best practices and financing mechanisms.

He concluded by stating the role of IUC will be supporting cities for them to have access to funding sources, capacity building, new market opportunities, PPPs and access to city networks.

Building smart and sustainable cities with citizen participation

Shri Swayandipta Pal Chaudhuri, MD & CEO – Imagine Panaji Smart City Development Ltd and Mission Director – AMRUT, Goa

The advent of smart cities gave new opportunities to explore and implement sustainable ways for urban development in Indian cities. In order to have holistic and inclusive implementation, the urban authorities need to adopt a comprehensive approach of capacity building and engaging with the citizens.

Mr. Chaudhuri stated the importance of climate resilient infrastructure development. He further described about sustainability being an integral element for building smart cities and implementing the technical and financial solutions of the missions for urban development. He stressed upon the role of capacity building initiatives and the importance of citizen engagement for implementation of urban missions and described how Imagine Panaji has tried to inculcate these methods in their planning processes. He highlighted the role of citizenship participation in discussions held on pedestrianisation of Panaji. He gave examples of the smart projects under SCM that are sustainable in nature such as converting the dump yard behind the central library into a walkway along the mangroves, and pedestrian and cycling infrastructure along the Mandovi river.

He concluded by thanking his team for effective implementation of the smart city projects in the city of Panaji.

Smart, Sustainable & Liveable cities

Shri Sidharth Kuncalienkar, Director, IPSCDL and Chairman, EDC Limited

The development of holistic urban core is a prerequisite in order to ensure economic prosperity of the nation. In order to ensure growth which is sustainable in nature, the urban missions should dwell on principles of sustainability. Thus, decision-making authorities should ensure implementation of projects which are smart, sustainable and liveable.

Mr. Kuncalienkar mentioned that the approach of a smart city is to rejuvenate urban areas and enhance the liveability in Indian cities. He further emphasised the importance of technology in order to ensure robust planning for future, to build cities which are sustainable, liveable and citizen friendly. He encouraged institutional integration along with citizen participation in order to achieve liveability. He described about the enthusiasm and acceptability of citizen with the smart city interventions. He stressed upon the objective of integration of nature with the urban areas describing the mangrove forest and tree plantation drive held by the forest department in 55 acres of land. He discussed the impetus of reduction in car ownership and promotion of public transport by planning and implementing a comprehensive mobility plan for the city. He described various projects planned under the smart city programme such as city surveillance systems, highway building, construction of the Mandovi Bridge and an integrated school complex.

He concluded by urging the stakeholders to come out with policy solutions to make Indian cities more liveable in nature.

(b) Status of Urban Missions, Capacities and Partnerships in Western Region

TERI presented the status of the states in the western region - Goa, Maharashtra, Gujarat and Daman & Diu - based on the 5 sub-themes mentioned below:

- Urban Policy and Planning for Liveability
- Strengthening Local Urban Governance Institutions
- Strengthening Partnerships
- Financing and Implementation
- Technical Innovation in City Context

The urban planning mechanisms followed in these states are primarily master plans and town planning schemes at city level, urban development schemes and mission at national level, and international partnerships and funding. The status was based upon the centrally sponsored missions such as Atal Mission for Rejuvenation and Urban Transformation (AMRUT), Smart Cities Mission (SCM), Pradhan Mantri Awas Yojana – Urban (PMAY-U), Swachh Bharat Mission - Urban (SBM-U), National Urban Livelihoods Mission (NULM), Heritage City Development and Augmentation Yojana (HRIDAY).

The status of the first theme *Planning & Policy Framework* described about the missions present in the states. All four states have centrally sponsored missions of SCM, AMRUT, SBM-U and PMAY-U. Additionally, Gujarat has also HRIDAY implementation.

The second theme *Financing & Implementation* describes the investment in states based upon the national missions. The state of Maharashtra has the highest investment from various missions.

The third theme *Technical/Innovative Solutions* describes the various technological solutions adopted by the states in order to address challenges faced in the field of transportation, citizen security and solid waste management.

The fourth theme *Partnerships* discusses the partnerships of the cities with the international partners supported by IUC such as Panaji with Dubrovnik, Nagpur – Karlsruhe, Solapur – Murcia and Surat – Rotterdam.

In addition to the status, the presentation also elaborated upon about the authorities responsible at National, State and City level.

(c) Activities & Key Takeaways for the National Policy Brief

Key Outputs from Individual Activity

The aim of the individual activity (Refer to Annexure II) was to understand the key concerns related to the theme of 'Infrastructure Development for Liveable Cities' and identify enablers, proposals, and institutions to overcome these barriers in the Western Region. The sectors of the theme were – 1) Urban Transport; 2) Solid Waste Management; 3) Water Management; and 4) Housing. Based on the findings from the responses, Urban Transport and Solid Waste Management were identified as the key sectors with highest priority for infrastructure development from all the respondents. To address the infrastructure development and enhance liveability of a city, the key enabler with highest priority given by all the respondents was Urban Policy and Planning (Refer to Figure 6). Additionally, 75% respondents also expressed that policy can provide the pathway but the implementation has to be supported by strengthening of local governance and financing mechanisms.

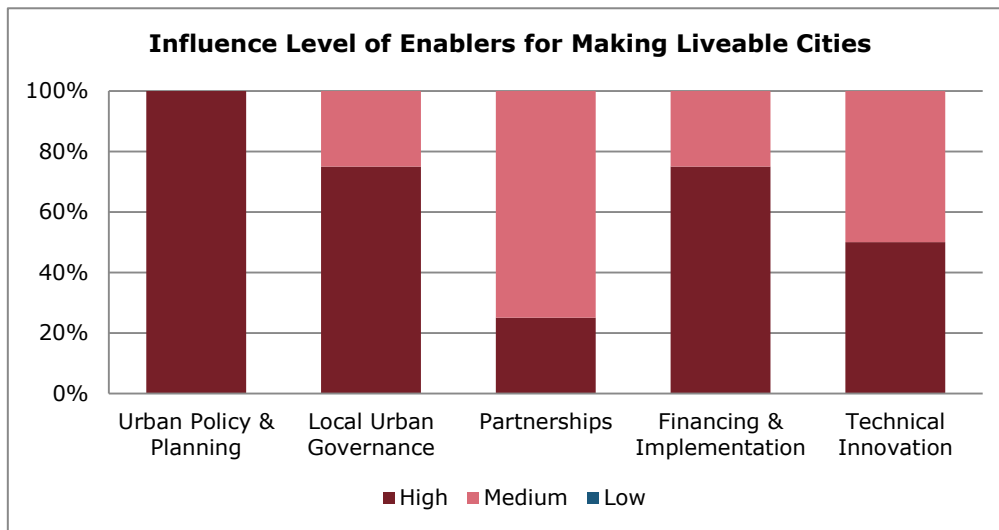


Figure 6: Enablers for Making Liveable Cities

The significant actions proposed by the respondents were formulating policies, effective implementation, sustainable financing, innovative technological solutions and the responsible stakeholders were identified as the Urban Development Department, Town and Country Planning board, Public works department, Science Technology & Environment Department, Pollution Control Board, the Directorate of Transport and the Municipal Corporation.

The respondents highlighted that the current efforts in the form of existing policies and/or solutions provided by their city to achieve progress in the prioritized sectors were formulation of city mobility plan & parking policy for the transport sector. There is also an emphasis towards efficient collection of solid waste and electricity generation from solid waste in this sector. However there are certain constraints for the implementation of these policies and/or solution(s) such as floating population is not considered while estimating infrastructure requirement, there is lack of enforcement of policies, lack of institutional integration, lack of awareness and lack of an efficient data management system.



Figure 7: Discussions between moderator and participants of the Group Exercise activity in Panaji

Group Exercise

The key objective of the group exercise (Refer to Annexure III) was to understand the existing challenges and gaps faced by the cities in the fields of policy and planning, local urban governance, financing & implementation mechanisms, technical innovation and to brainstorm on the recommendations and good practices in the respective fields.

Groups:

- Urban Policy and Planning, Moderated by - Pratap Padode, Smart City Councils India
- Local Urban Governance, Moderated by - Riya Rahiman, TERI
- Financing & Implementation Mechanisms, Moderated by - Nilesh Rajadhyaksha, NIUA
- Technical Innovation, Moderated by - Palak Thakur, TERI

Key Outputs from the Group Exercise

Existing Challenges

○ **Urban Policy and Planning**

The key barriers in the policy and planning domain were lack of institutional integration for urban transport sector. There is no nodal agency to address urban transport issues. There is also no policy mandating climate resilient infrastructure and a lack of defined mechanisms for waste disposal. In the electricity sector, there is no significant policy for checking the distribution losses.

○ **Local Urban Governance**

The local governance sector lacks inter-departmental coordination. In terms of water and sewerage sector, there is partial coverage of water supply and sewerage amenities and no implementation plan for full coverage. There is an absence of push towards technological innovations to bridge the demand & supply gap.

○ **Financing and Implementation Mechanisms**

In the financing and implementation avenue, the major concern is lack of coordination among line departments. The risk of huge capital investments and inadequate capacity is a key barrier which is hindering the implementation processes.

- **Technical Innovation**

Technical innovation is a prerequisite for meeting issues such as lack of last mile connectivity options, high congestion, lack of parking solutions, lack of pedestrian and cycling infrastructure and limited public transport. Presently, there is no funding available to support the innovation component to address these issues.

Recommendations and Good Practices

- **Urban Policy and Planning**

The key recommendation of the policy and planning sector is to integrate various departments working in the urban transport domain, mandating policy to have solid waste energy plants, incentivising usage of dry water and rain water harvesting, preparing GIS based housing database and exploring alternative sources of renewable energy.

- **Local Urban Governance**

Local governance requires appointing of a nodal agency for implementation of low carbon mobility plan to address the concerns of urban transport. In order to address the solid waste management of the region, active awareness campaigns can be implemented. Effective implementation of smart meters will also support the local governance monitoring mechanisms.

- **Financing and Implementation Mechanisms**

The financing and implementation challenges can be addressed by creation of SPV Models or empowering the ULBs. PPP-based solutions can be integrated with innovative technology solutions for O&M management. Detailed preparation of comprehensive contracts, improvement of tariff collection mechanisms and better payment mechanisms can be other solutions. The implementation processes can also be supported with effective data management systems, capacity building programmes and public awareness.

- **Technical Innovation**

Many innovative technological solutions such as e-vehicles as a clean solution for last mile connectivity, smart traffic signals to reduce congestion, PBS for convenient public transport, universal walkways to promote pedestrianization, congestion charging, inland water transport, and smart parking in urban transport sector were suggested. Bio-gas plants, mandating sanitary napkin incinerator, smart bins, and installing of local treatment systems were highlighted as relevant technology solutions.

Northeastern Region Policy Dialogue

(a) Setting the Context: Environmental Sustainability & Climate Action for Liveable Cities

Overview of the Regional Policy Dialogues

Ms. Raina Singh, Area Convenor, TERI, provided the background and structure for the Regional Policy Dialogues. She highlighted the context of the Global Urban Agenda 2030 for achieving sustainable urban development and the importance of the New Urban Agenda and other initiatives such as the Kuala Lumpur Declaration 2018 to achieve the targets of SDG 11. The urban missions of India are in line with these global goals and focus on provide basic infrastructure to all citizens, quality of life, a clean and sustainable environment, and creating 'light houses' of replicable models.

She further elaborated upon the features that make a city 'liveable' such as emphasis on a high quality of life – with focus on social and cultural aspects, the significance of a sustainable environment, the presence of a competitive economy for achieving economic security and effective and participatory governance. The government of India has recently launched the 'Ease of Living' Index which is an indicator for determining the level of liveability in Indian cities.

After introducing the themes, objectives and outcomes of the Regional Policy Dialogues which are driven by the cities, it was mentioned that the major output of the dialogues would be the National Policy Brief which is being released at the National Workshop in New Delhi. In the Northeastern region, the discussions revolved around how climate change can be addressed and environmental sustainability can be improved upon to enhance liveability in cities.

Towards Liveable Cities

Mr Shri Prakash, Distinguished Fellow, Sustainable Habitat Programme, TERI

In India, we are seeing rapidly expanding urban centres with their increasing contribution to the national GDP. At the same time, cities also face tremendous pressures on their civic infrastructure systems like water supply, sewerage and drainage, solid waste management, etc. To address these challenges and with a vision for planned urban growth, schemes like AMRUT and Smart City Mission were launched by Government of India in 2015. The Ministry of Housing and Urban Affairs has also launched the 'Ease of Living Index' with an objective to mainstream quality of life parameters, and monitoring and performance evaluation on the same. The Government of India is making constant efforts to overcome challenges of urbanization through its national missions focusing on sustainable and liveable cities. Through the Regional Policy Dialogues, TERI is attempting to collate the challenges faced by various regions.

Mr Prakash formally welcomed all participants to the Northeastern Region Policy Dialogue to mainstream key urban sustainability issues and enhancing the quality of living in Indian cities. He stated that this particular Dialogue on the theme of 'Environmental Sustainability & Climate Action for Liveable Cities' is being jointly hosted by TERI and the State Government of Sikkim. He then formally welcomed Shri Pawan

Chamling, Hon'ble Chief Minister, State of Sikkim, by expressing that his continuous and consistent efforts towards environmental sustainability are a source of inspiration to all of us. He also welcomed Mrs G.D. Pradhan, Secretary, Urban Development and Housing Department, Govt. of Sikkim, and various national and international experts, and the distinguished participants who had joined from various cities and states across the NE Region – from urban development departments, municipal corporations and smart city SPVs.

He stressed upon India's global commitments, as cities are expected to deliver the agenda of SDG 11, Paris Climate Agreement and Kuala Lumpur Declaration towards sustainable, resilient and inclusive urban growth. He highlighted that though the current urban schemes and missions have surely developed a momentum for urban and infrastructure development in the country, it is important to understand that any efforts towards achievement of SDGs will need to follow an environmentally sustainable and people-centric approach towards urban planning and infrastructure development. He also explained that the objective of the session is to hear the key challenges and identifying the game changing action points with the cities and concerned local and state level agencies itself, and the outputs of this session will be documented and shared with the Ministry of Housing and Affairs, Government of India to formulate a more robust framework for enhancing liveability of India cities.

Role of IUC for achieving urban and climate agendas

Mr Pier Remitti, Programme Director, International Urban Cooperation/India

The cities are consistently subjected to challenges of urbanization which the urban authorities are struggling to cope with. Globally, there are various urban and climate agendas to address urban challenges faced by urban areas with respect to energy, water, health, transport and housing facilities. The European Union launched International Urban Cooperation (IUC) programme in which IUC creates city-to-city cooperation on sustainable urban development.

Mr Remitti presented scope, targets and activities planned for IUC in India. The IUC programme boosts access to expertise in urban development policy thereby supporting cities to promote smart, green and inclusive growth, and fostering better ways to plan, finance, develop, govern and manage cities. He further elaborated on the partnership mechanism between an India and European Union to achieve sustainable development while contributing to India's Smart Cities mission, AMRUT and other urban missions. He explained the IUC implementation mechanism and stated that globally 9127 cities have shown their commitment to Global Covenant of Mayors for Climate and Energy. He explained the role and importance of Global Covenant of Mayors is to create the largest coalition of cities and local governments supported by global and local city networks, committed to greater climate impact and recognition. He emphasised on the agenda of climate action thereby improving quality of life, creating new jobs and economic opportunities, while ensuring a climate safe for future generations.

He described the action planning process to be adopted in Indian cities which would be focusing on integrated city planning mechanisms. He stressed on identification and description of challenges and involvement of key stakeholders to achieve sustainable development, and the access to funding through private sector involvement. He

described that through these partnerships, IUC is helping cities to come up with policy level interventions, technology interventions and financial mechanisms. The output of the partnership will be in the form of a joint action plan. He concluded by stating the role of IUC will be to support cities to have access to funding sources, capacity building, new market opportunities, PPPs and access to city networks.

Initiatives towards green and sustainable cities

Mrs G.D. Pradhan, Secretary, Urban Development & Housing Department, Government of Sikkim

Mrs. Pradhan highlighted that 'Environmentally sustainable, resilient and liveable urban settlements' is one of the key focus areas of Sikkim Government's growth agenda. She added that the constant effort of Government of Sikkim, towards achieving SDGs and fulfilling the New Urban Agenda through the multiple initiatives that we are implementing in urban areas across the state to make cities sustainable, smart, inclusive and resilient. She emphasised the sustainable initiatives implemented by the Govt. of Sikkim to regulate environmental pollution (plastic ban), promote environmentally sustainable construction practices (Green buildings and GRIHA rating), conserve biodiversity and green spaces (Go Green initiative), and address climate change issues for multiple decades now.

She stressed upon the State Govt.'s focus on enhancing liveability of our cities through urban development initiatives to the tune of about INR 3,000 crores under various urban missions in last four years. These initiatives include projects on sustainable infrastructure provision, energy efficiency, affordable housing and smart governance. As a result, two Sikkim cities – Gangtok and Namchi – feature in India's 'Ease of Living Index 2018'. She explained Sikkim's people-centric approach towards liveability by giving example of the rejuvenation of MG road as a walkable, public-friendly and cultural space.

However, in spite of these commitments, the current pace of urbanization is a cause for concern for all of us. Access to safe water and sanitation, access to safe and affordable public transportation, Green House Gas (GHG) emission and air pollution, adequate affordable housing, waste management, and climate change related extreme events are some of the challenges that our urban areas are facing across the region and the Country at large. In this context, this Regional Policy Dialogue on 'Making Liveable Cities: Challenges and Way Forward' holds great relevance to all of us in terms of understanding what the 'New Urban Agenda' and 'liveability' implies for our cities and how we can mainstream these principles in urban development.

She concluded by stating that through these deliberations we can identify some key game-changing action points that go beyond physical planning and infrastructure development to include robust and innovative approaches for an environmentally sustainable and resilient urban development model at the state and national level.

Need for climate action to make liveable cities

Shri Pawan Chamling, Hon'ble Chief Minister of Sikkim



Figure 8: Special Address by Hon'ble Chief Minister Pawan Chamling, State of Sikkim

Shri Chamling welcomed the gathering of technocrats, scientists, architects, officials from different states, and TERI, Royal Embassy of Denmark and IUC for initiating the Northeastern Regional Policy Dialogue on the theme "Environmental Sustainability and Climate Action in Liveable Cities".

He expressed his concern about the urbanization, rural – urban migration, and impact of urbanization on natural ecosystem and unsustainable development. He also stated in the process of developing cities, issues of climate change must be addressed with utmost urgency. According to the Paris Climate Agreement of keeping global temperature below 2 degree centigrade, it is vital that the world maintains carbon budgetting and limits carbon dioxide emission below 800 gig tonnes.

He also expressed concerns about the impact of climate change in the mountain ecosystem by addressing the havoc in Kedarnath valley in Uttarakhand, floods in Kerala, Himachal Pradesh and Nagaland. He discussed the challenges faced by the mountainous cities with respect to biodiversity, urban heat islands, congestion and pollution etc. He also stressed upon challenges bought by the tourists. Though tourism serves as the major component of economy, the lack of infrastructure creates a huge demand & supply bridge.

He addressed his concern towards disaster resilience by describing the damage caused by the earthquake of September 18, 2011. He expressed vital need for disaster resilient infrastructure and disaster mitigation plans.

He concluded by suggesting following points towards 'Making of Liveable Cities' -

- Developing better mechanisms for using scientific knowledge in urban policy and practices especially in green-urban landscape design and management.
- Identifying priority areas of infrastructure interventions and explore possibilities of making mountain cities energy efficient, and use renewable sources of energy.
- Enhancing urban biodiversity and transform all urban cities into green cities.
- Keeping springs and water courses unaffected by negative impacts of urbanization and identifying solutions in case of impact.
- Strengthening awareness and education on urban ecosystems.
- Keeping springs/water courses unaffected by negative impacts of urbanization.
- Designing safe models for eco – efficient road mobility and parking.
- Exploring possibilities for multi-institutional research grants addressing cross-regional needs by developing interdisciplinary projects.
- Developing mechanisms to build appropriate partnerships at regional and global level addressing common challenges of urbanization and climate change.

(b) Status of Urban Missions, Capacities and Partnerships in Northeastern Region

TERI presented the status of the states in the Northeastern region - Sikkim, Meghalaya, Mizoram, Assam, Manipur, Nagaland, Tripura, Arunachal Pradesh, Bihar, Jharkhand, and West Bengal - based on the 5 sub-themes mentioned below:

- Urban Policy and Planning for Liveability
- Strengthening Local Urban Governance Institutions
- Strengthening Partnerships
- Financing and Implementation
- Technical Innovation in City Context

The urban planning and development mechanisms that are mostly followed by the country are master plans and town planning schemes at the city level, urban development schemes and missions at the state and national level and through international partnerships and funding. The statuses of the states and union territory was based on the centrally sponsored missions of Atal Mission for Rejuvenation and Urban Transformation (AMRUT), Smart Cities Mission (SCM), Pradhan Mantri Awas Yojana – Urban (PMAY-U), Swachh Bharat Mission - Urban (SBM-U), National Urban Livelihoods Mission (NULM), Heritage City Development and Augmentation Yojana (HRIDAY).

In terms of the Urban Policy & Planning Framework, the Smart Cities Mission, AMRUT, SBM-U, and PMAY-U are functional in all the areas. Regarding the financing and implementation mechanisms, Sikkim has the highest proposed investment of 3224.56 crores in its Smart City Proposal. Under the Smart Cities Mission, smart mobility and smart parking are main aspects apart from solutions for drainage, water management, infrastructure, solid waste management and safety and security of the citizens. Currently, there are no city-to-city partnerships and international collaborations in the region.

The institutional framework was also discussed to identify the responsible public bodies and authorities at the national, state and city level, that support the sustainable urban development of cities in the Northeastern Region.

Contextualization of National Policies

According to Mrs. Devika Sharma Chhetri, Chief Town Planner, Government of Sikkim, one of the main challenges for the Northeast region is the adaptation and contextualisation of national policies in terms of the culture and geography of the cities in the region. She elaborated that only 11% of land is available for all activities including agriculture. Further, solid waste generation is an important concern. There are no planning guidelines specifically for hilly areas and a lot of the policy and model building codes provided centrally are not suitable for the local conditions.

The Gangtok Municipal Commissioner highlighted the need for addressing the issues of the peri-urban areas which are increasing rapidly. The section of the population which

contributes to the GDP of the cities usually belong to the lower income strata who stay in the suburbs and not in the core areas of the cities. In Gangtok, another major issue is traffic congestion which has reduced the number of walkable spaces in the city. Thus, mobility and managing traffic is a big constraint which calls for the need for safe pedestrian infrastructure. Another set of issues that need to be focused on in urban areas are access to drinking water and sewerage treatment plants. Due to the consumer culture and lifestyle changes in the city, solid waste management is an important consideration for disposal of garbage.

The Aizawl Municipal Commissioner added a major issue is increasing population in the region as there is a huge floating population. Cross-boundary migration also adds to the population which puts pressure on the existing resources such as traffic management and water supply. Solid waste management is another issue due to insufficient treatment plants. Disasters such as landslides and earthquakes are further challenges for which building regulations need to be considered and special designs for earthquake situations are required. The comprehensive protection of the natural environment is now imperative.



Figure 9: Inaugural Session in progress for the Northeastern Region Policy Dialogue in Gangtok, Sikkim

(c) Activities & Key Takeaways for the National Policy Brief

Key Outputs from Individual Activity

An activity sheet was circulated amongst the participants (Refer to Annexure II) to gauge the levels of priority they gave to the different sub-themes identified in the dialogues as well as the different aspects of the theme of 'Environmental Sustainability & Climate Change' for the Northeastern Region. The aspects of the theme were – 1) Natural Environment; 2) Urban Environment; 3) Low Carbon Growth; and 4) Climate Change & Disaster Resilience. We posed questions related to the actions and the responsible stakeholders that the states would involve for implementing policies. We also asked participants to elaborate on any policies that exist in their cities to enhance liveability along with any constraints that they face in implementing the same.

As observed in Figure 10, the Natural Environment component and the Climate Change & Disaster Resilience component had the highest priority amongst the respondents (70% and 60% respondents respectively). 60% of the respondents selected both Urban Environment & Low Carbon Growth as Medium priority emphasizing the equal importance of addressing these components to achieve environmental sustainability.

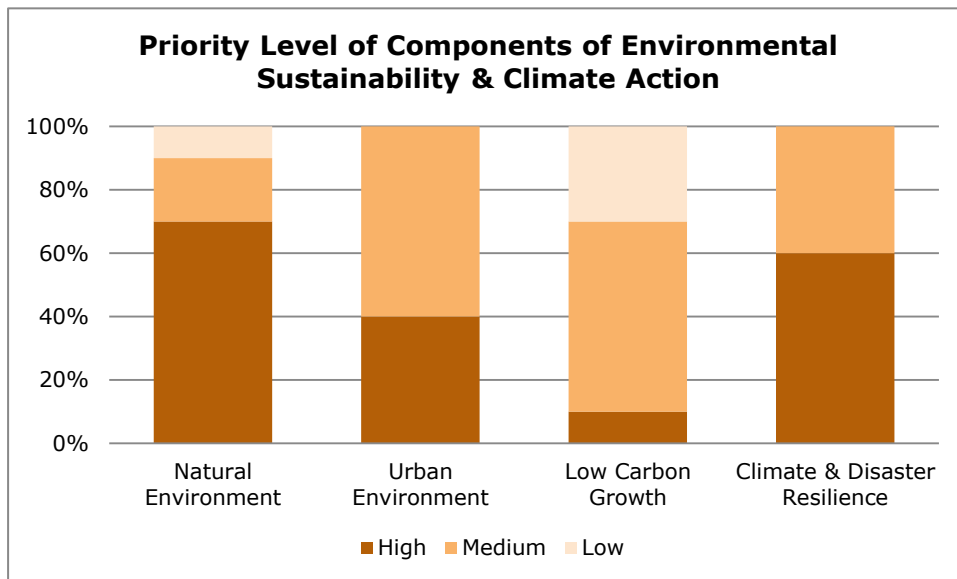


Figure 10: Components of Environmental Sustainability & Climate Action for Liveable Cities

The enablers of Urban Policy and Planning, Local Urban Governance and Financial & Implementation Mechanisms were High priority for 70% of respondents demonstrating the interconnectedness of these components to enhance the liveability of cities. Respondents oscillated between High to Medium priority for the enabler of Strengthening Partnerships as it is an important facilitating element to ensure that sustainable urban development is achieved.

In terms of actions needed for implementation, addressing the rejuvenation of water bodies with a robust and effective drainage system, solid waste management and the planning of urban mobility and public transport were highlighted. To this end, the urban policy guidelines and framework being formulated would need to be strengthened along with proper monitoring to facilitate and guide the implementation of the policies. A strong legal and institutional system is required to support the policy framework and

incentivising the good performers/stakeholders in the region would be useful. For strengthening local urban governance such as the municipal corporation, awareness, contextualization of policies and capacity building is essential for them to run efficiently.

The respondents identified different types of stakeholders which would be responsible for implementation of the actions identified by them. These stakeholders include the state government, the ULBs, the community and the public-private partners. Involving local bodies such as district councils, town planners, municipalities and line departments, would enable effective implementation at the local level and promoting community participation in such a scenario is equally significant. The Urban Development and Dousing department of the state government is also an implementing body that can provide the technical expertise for management of urban issues.

A recurrent response amongst the participants was that there is no existing policy that specifically tackles urban sustainability issues in the region. Most of the states are dependent on the urban missions being implemented in specific cities, such as in Shillong, and for them to extend the learnings to other cities. Interventions under urban missions of SCM, AMRUT and SBM-U are only partially addressing the prioritised issues. There is adaptation of organic farming and ban on plastic bags in some areas for sustainability along with adoption of GRIHA green building codes. In terms of policies, respondents mentioned that the State Urban Transport Policy is in the draft stage, a Municipal Cadre is under consideration by the state government and a State Sanitation Task Force had been constituted to take up climate change mitigation in the urban development departments.

Due to difficult terrains, a major constraint faced by the region is the low availability of space and usable land. With rigid central acts, land tenure system and political will and instability, the issues of the state and central governments need to be first addressed to improve the level and implementation of policies. The multiplicity of local authorities also requires better coordination between the departments backed with a strong legal and institutional system. Lack of awareness is another constraint and there needs to be proper dissemination of information and understanding of requirements from the grassroots level to the state level. Low funding and data availability are added constraints in the region as the poor economy of the states and corruption are some of the main hindrances to improve urban development.

Group Exercise

The participants were provided with matrix charts to elucidate upon the existing challenges faced by the cities in the Northeastern Region and the recommendations and good practices that address these challenges (Refer to Annexure III). A moderator was assigned to each group and a group representative was identified who presented the outputs of the group at the end of the activity. Each of the sub-themes and aspects of environmental sustainability & climate change were discussed in detail to identify solutions that can enhance liveability of cities.

Groups:

- Urban Policy & Planning, Moderated by – Hemant Badola, Advisor, CM’s Office; Adishree Panda, TERI
- Local Urban Governance, Moderated by – RL. Zidinga, Deputy Director, UD & PA Department, Mizoram; Raina Singh, TERI
- Financing and Implementation, Moderated by – E. Kharmalki, Joint Secretary, Urban Affairs, Meghalaya; Palak Thakur, TERI
- Technical Innovation, Moderated by – Shri Shakti Singh Choudhary, Mayor, Gangtok Municipal Corporation; Pier Remitti, IUC

Key Outputs from the Group Exercise*Existing Challenges*○ **Urban Policy and Planning**

There are habitat sensitivity and topography challenges wherein flora and fauna face either endangerment or extinction. So, there is a need for understanding how to protect natural resources. There is also a lack of suitable open spaces as well as parking facilities and encroachment in the cities has led to congestion. There is a need for proper classification of transport as there is a lack of public transport in the region. There is a dependency on building materials from outside the region and even though there are not many industries, the pharmaceutical companies are adding to the carbon growth. Further, there are manifestations of climate change such as landslides, forest fires, earthquakes and glaciers melting leading to floods. Sinking of land is also another significant issue.

○ **Local Urban Governance**

There are issues of coordination between multiple local bodies so there is a need for a policy that can support in strengthening the capacity of the bodies to coordinate data management and technical support handholding. The institutional capacity needs to be increased as well as addressing the needs of peri-urban areas and the informal sector as currently there is non-inclusive decision-making. Further, there is a need for regulations, policy and fiscal incentives for implementation. Data systems and recording need to be updated especially at the city level.

○ **Financing and Implementation Mechanisms**

There is a lack of available land for creation of green spaces and existing green spaces are being converted for infrastructure development. The forest cover needs to be controlled as there is illegal selling of timber. Solid waste management is a major challenge due to unavailable landfill sites. Moreover, there is a lack of funds and private investors available in the Northeast Region. Due to an increase in number of vehicles with existing vehicles not following green norms, there is a need for a scrapping policy for old vehicles. There is also a lack of dedicated funding for Climate and Disaster Resilience and financing is required for measures to be adopted for identification of vulnerable areas especially for flash floods areas that occur during monsoons because of incessant rainfall.

○ **Technical Innovation**

The existing challenges in technical innovation is in effectively addressing issues such as landslides, flash floods, shortage of water, seismicity and threat to biodiversity. Due to unregulated population growth, there is a lack of urban green spaces, issues of solid waste management and management of traffic and mobility. Energy efficiency in buildings also needs to be addressed, along with awareness for other low carbon techniques. Timely delivery and inventory of relief for natural disasters is required supported by good connectivity and communication to mainstream resilience in urban development.

Recommendations and Good Practices

○ **Urban Policy and Planning**

The coordination of various authorities and line departments is imperative for including stakeholders and community participation as well as public awareness at the grassroots levels. For the conservation and preservation of sensitive areas, it is relevant to conduct proper mapping of slopes and sensitive habitats, terrain analysis, strengthening building bye-laws, modifying drainage systems, and provide incentives for change in land use. It was suggested by respondents to convert any available land to walkable/green spaces and encourage measures such as afforestation and pedestrianization. Green states, such as those promoting energy-efficient buildings, should be given financial incentives, and locally available materials should be utilized for construction. Proper awareness and mitigation measures should be put in place including scientific inputs and early warning systems. Research and collaboration amongst institutions is of utmost importance to enable such measures.

○ **Local Urban Governance**

Urban governance and urban development issues should be approached at a cross-sectoral level and capacity building programmes need to be reinforced to develop intrinsic capacities of governance bodies. It is important to include local groups in decision-making processes, especially in relation to land management. Institutional provisions and capacities should be strengthened along with the data systems at the city level, such as incorporating GIS personnel in Municipal Corporations.

○ **Financing and Implementation Mechanisms**

Adequate and increased funds for implementation should be allocated by the central government, and through PPP models, incentives should be given to develop green spaces which are not utilized for any other land use. A policy to scrap old vehicles is required along with declaring no-vehicle zones and redesigning the existing pedestrian zones. Public transportation should be encouraged with reduced fares and parking facilities should be reduced for citizens to switch to public transport. Collection of green tax can be put in place and adopting building bye-laws to incorporate green norms is a relevant aspect. Moreover, a city level action plan is required to mitigate climate change and for adaptation and resilience building.

○ **Technical Innovation**

In terms of technical innovation, proper drainage, rainwater harvesting, and storm water management systems should be put in place. Legislations need to be put in place for reviewing human-wildlife conflict. It is important to customise green building codes based on local conditions, along with having aerobic solutions such as rooftop/vertical green-scapes, bio-toilets, to improve sustainability of urban spaces. Utilizing renewable energy sources, promoting car-pooling and public transport/ropeways would enhance such sustainable endeavours. In order to have resilient systems, a local repository of data should be created which supports early warning systems and easy dissemination of information such as through mobile apps.



Figure 11: Discussions of challenges and recommendations of environmental sustainability issues in the Group Exercise activity

Figure 12: Mrs Devika Sharma Chhetri, Chief Town Planner, Govt. of Sikkim, providing the concluding remarks to the audience



ANNEXURE I: AGENDA TEMPLATE

Vijayawada Region Policy Dialogue, 19th September

   		
<p>Southern Region Policy Dialogue 'Making Liveable Cities: Challenges and Way Forward'</p>		
<p>Date: 19th September, 2018 Venue: Fortune Murali Park, MG Road, Vijayawada Time: 10 AM – 02:00 PM</p>		
10:00 am - 10:45 am	Inaugural Session	
10:00 am - 10:05 am	Welcome Remarks	Dr. Ajay Mathur, Director General, The Energy and Resources Institute (TERI)
10:05 am - 10:10 am	Setting the Context	Background Presentation by Ms. Raina Singh, Area Convener, Centre for Urban Planning and Governance, TERI
10:10 am - 10:15 am	Special Remarks	Mr. Panagiotis Karamanos, Team Leader, International Urban Cooperation/ India
10:15 am - 10:20 am	Special Remarks	Ms. Kamilla Kristensen Bai, Counselor – Urban Development, Royal Danish Embassy in India
10:20 am - 10:25 am	Special Remarks	Shri. Ajay Jain, IAS, Principal Secretary - Energy, Infrastructure & Investment Department, Government of Andhra Pradesh
10:25 am - 10:40 am	Inaugural Address	Dr. P. Narayana, Hon'ble Minister of Municipal Administration and Urban Development, Government of Andhra Pradesh
10:40 am - 10:45 am	Vote of Thanks	Shri. Chandrasekhar Reddy, CEO, State Energy Conservation Mission, Andhra Pradesh
10:45 am - 11:00 am	Tea	
11:00 am - 02:00 pm	Technical Dialogue on 'Urban Planning and Governance for Liveable Cities'	
11:00 am - 11:15 am	Status of Urban Missions, Capacities and Partnerships in Southern Region	Background Presentation by TERI
11:15 am - 12:45 pm	Roundtable Discussion	Moderated by: Dr. Ajay Mathur and Dr. Sreedhar Chenuki, Commissioner, Andhra Pradesh Capital Region Development Authority (APCRDA)
12:45 pm - 01:45 pm	Thematic Breakaway Sessions	Focused Group Discussions and Activities on: <ul style="list-style-type: none"> - Urban Policy and Planning for Enhancing Liveability - Strengthening Local Urban Governance Institutions - Financing and Implementation Mechanisms - Technical Innovation in City Context - Strengthening Partnerships
01:45 pm - 02:00 pm	Concluding Session	Key takeaways for the National Policy Brief Moderated by: Dr. Ajay Mathur and Dr. Sreedhar Chenuki
02:00 pm	Lunch	

ANNEXURE II: ACTIVITY SHEET TEMPLATE

Panaji Region Policy Dialogue, 21st September

Name of City:

Name of State:

Q1. Prioritize the following relevant sectors for infrastructure development with context to your city:
(Please tick your preferred choice)

SECTORS	PRIORITY LEVEL		
	High	Medium	Low
Urban Transport			
Solid Waste Management			
Water Management			
Housing			

Q2. In your opinion, which of the following key enablers, and to what extent, can help towards enhancing liveability of your city? (Please tick your preferred choice)

ENABLERS	INFLUENCE LEVEL		
	High	Medium	Low
Urban Policy and Planning			
Strengthening Local Urban Governance			
Strengthening Partnerships			
Financing and Implementation			
Technical Innovation			

Q3. Based on the above prioritization, what specific actions need to be taken and which entities/ stakeholders should be involved for effective implementation?

	(1)	(2)	(3)
a. <i>Actions</i>			

**b. *Responsible entities/
stakeholders
for
implementation***

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Q4. What are the existing policies and/or solution(s) provided by your city to achieve progress in the prioritized sectors?

Q5. Which are the biggest constraints faced by your city for implementing these policies and/or solution(s) and how was it addressed?

ANNEXURE III: GROUP EXERCISE TEMPLATE

Gangtok Region Policy Dialogue, 9th October

THEMATIC BREAKAWAY SESSIONS

- Duration: 1 hour
- Preparation for Focused Group Discussion/Activity:
 - Participants will be divided into groups based on diversity of background per group
 - 4 main components of 'Environmental Sustainability & Climate Change' have been identified for the Eastern & North Eastern Region
 - Two charts with matrices of 5 sub-themes allocated to each group to identify and document the following for their respective components
 - Existing Challenges and Gaps
 - Recommendations and Good Practices
 - 1 Moderator and 1 group representative is identified for each group
- Group Activity:
 - Each moderator introduces their allocated sub-themes and the 4 components in the matrix chart
 - Groups discuss for 30 minutes on their sub-theme
 - Groups take the next 15 minutes to document key points and takeaways
 - Presentations – Group representatives present the outcomes (3 min each)
Total time – 15 minutes.

GROUP EXERCISE MATRIX - I

Environmental Sustainability & Climate Change – Existing Challenges and Gaps

Themes/ Issues	Policy and Planning	Strengthening Local Urban Governance	Financing and Implementation Mechanisms	Technical Innovation	Partnerships
Natural Environment					
Urban Environment					
Low Carbon Growth					
Climate & Disaster Resilience					

GROUP EXERCISE MATRIX - II					
<i>Environmental Sustainability & Climate Change - Recommendations and Good Practices</i>					
Themes/ Issues	Policy and Planning	Strengthening Local Urban Governance	Financing and Implementation Mechanisms	Technical Innovation	Partnerships
Natural Environment					
Urban Environment					
Low Carbon Growth					
Climate & Disaster Resilience					