Indian Urban Futures VI 2025

Garden settlements for the 21st century

2025 Southern Indian Symposium Report

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(Garden Settlement for 21st Century)
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Preface by Dr. Cletus Babu, Founder Chairman, SCAD Group

It was a distinct honour for the Social Change and Development (SCAD) Group to host the Indian Urban Futures Symposium at FX Engineering College in Tirunelveli. Following the formal welcome extended by the Principal, Dr V Velmurugan, I had the privilege of offering the opening remarks for what proved to be a highly productive and insightful symposium.

Since its inception in 1985, SCAD has been dedicated to fostering the potential of marginalised communities through interventions in education, community development, and healthcare. The theme of this conference, "Garden Settlements for the 21st Century," holds particular relevance to our ongoing efforts in the Tirunelveli region. The ecological transformation we have witnessed, from what was once **barren** land to a **flourishing** green environment through collaborative community action, serves as a formal demonstration to the power of **collective vision** and determined effort – principles that are equally applicable to the **complex challenges** of urban development, particularly within the unique socio-economic and environmental context of Southern India.

This symposium further provided a valuable platform for **international collaboration**, fostering the exchange of knowledge and best practices between experts from India and the United Kingdom. Notably, Dr. Nicholas Falk, Executive Director of the URBED Trust, the symposium's sponsor, highlighted the necessity of planned garden settlements to avoid the pitfalls of urban sprawl and **high-density residential buildings**. Furthermore, Brian Love, Director of Love Architecture, presented the concept of ConnectedCities, a modern adaptation of Ebenezer Howard's Garden City ideas, demonstrating how development around railway stations can effectively mitigate urban sprawl. Prachi Rampuria, Co-founding Director of EcoResponsive Environments, introduced the 'EcoTopia' concept, emphasizing a holistic and multi-scalar design approach for sustainable growth.

The symposium also featured insightful presentations on various facets of urban development. Dr. Mohammad Firoz from the National Institute of Technology, Calicut, addressed the crucial theme of creating family-friendly cities, advocating for urban spaces that cater to all ages and socio-economic groups. Smritika Srinivasan from the Institution for Transportation and Development Policy (ITDP) India, Chennai, made a compelling case for prioritizing healthy streets and sustainable mobility for vulnerable populations over private vehicles. Albert Raja, Assistant Planner at the Chennai Urban Metropolitan Transport Authority (CUMTA), discussed the importance of investing in integrated public transport systems to enhance accessibility and reduce travel times. Finally, Mr. M Mathivanan from the Agasthanamalai Community Conservation Centre shared valuable lessons from his work on the social-ecological systems of the Tamiraparani River, highlighting the need for integrated actions to improve both environmental health and the quality of life for inhabitants.

This report encapsulates the key discussions, expert presentations, and salient insights that emerged from the conference, which convened a distinguished assembly of national and international thought leaders. It underscores the imperative for innovative and sustainable strategies in addressing India's evolving urban landscape, encompassing critical areas such as housing, transportation infrastructure, community engagement, and public health.

The exploration of garden settlements as a model for urban growth offers a compelling pathway towards creating more sustainable, resilient, and livable urban environments for the future.

It is my sincere hope that the findings and recommendations articulated within this report will serve as a catalyst for continued dialogue and meaningful action towards the realisation of a more prosperous and sustainable urban future for India.

Fig.1 - Indian Urban Futures VI - South India Symposium, February 2025

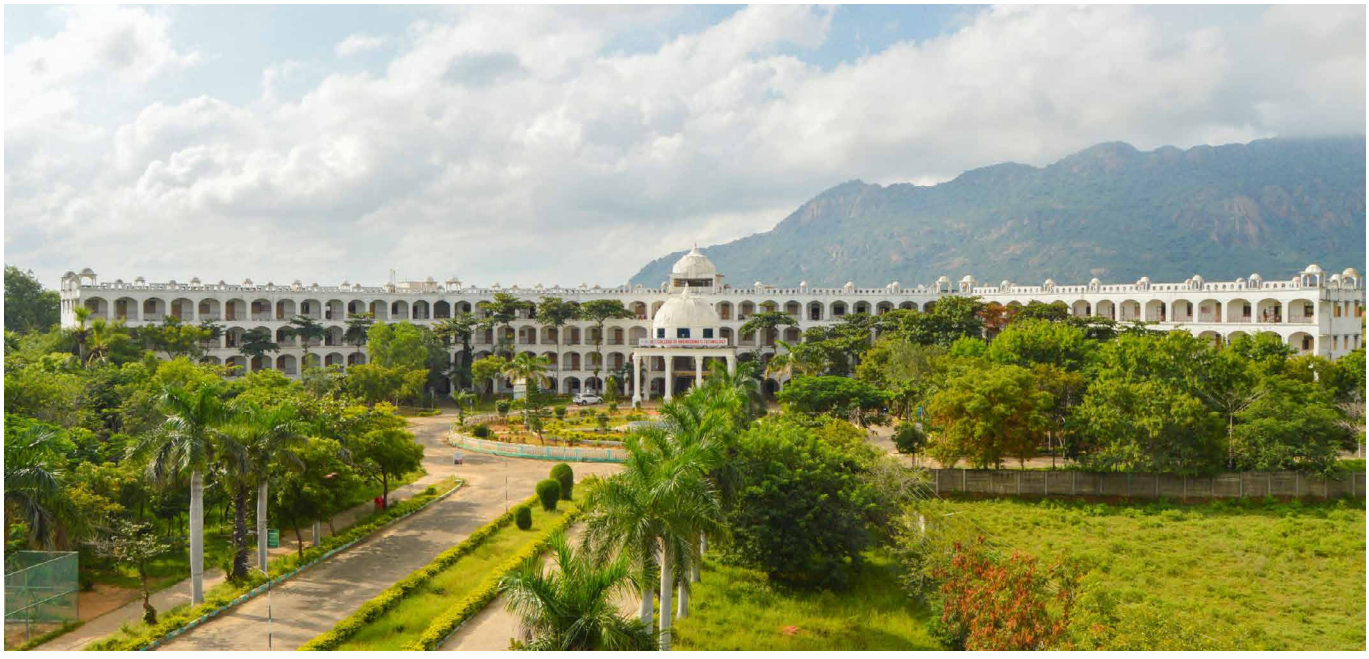


Fig.2 - SCAD's Cheranmahadevi lush-green campus in the backdrop of the Western Ghat mountains

Executive Summary

This was the sixth conference in a series which started in London in 2017 thanks to the Urban Design Group. The aim was to 'generate interest in new forms of affordable housing in medium-sized cities.' It followed up previous conferences in Chennai and Tirunelveli in 2019 and in Bristol in 2021. The original themes were housing, transport, community engagement and public health. The focus of the latest conference was on Garden Settlements for the 21st Century.

The latest conference was held in FX Engineering College in the centre of Tirunelveli. It drew an invited audience of over a hundred delegates and there were ten presentations by expert speakers. It was an international conference and three of the presenters came from the UK including Prachi Rampuria, who spans both countries, and who must be thanked for getting such a great group of contributors together. The event was filmed and an edited version will be available along with the slides. The report summarises the main points that were raised. Further reports and sources of useful information, along with the presentations, are freely available on the website of the URBED Trust, www.urbedtrust.com.

Introductory speeches

After the formal ceremonies of welcome from the Principal of FXEC Dr V Vei Murugan, Mr Amirthan Charles, who coordinates education and community development work at SCAD, kicked the conference off by introducing what SCAD does. Started by Dr Cletus Babu in 1985 SCAD, standing for Social Change and Development, helps marginalised groups to reach their potential through education, community development, and health services. The Nirman Trust works with Womens Groups, now 3,400 in 600 villages with some 40,000 members in all. The groups save money together drawing on technical assistance from SCAD's colleges and services such as their agricultural research centre near Tuticoorin. The groups have helped implement projects like restoring 265 traditional water harvesting systems, while 2,000 kitchen gardens help improve nutrition. A large bio-digestion system on the original Cheranmahadevi campus turns food waste into campus lighting. SCAD also produce microbes and biochar to improve the soil. Together with an award-winning Ecohouse which the URBED Trust and SCAD built together they form their centre for sustainable development, which is called the Gardens of Delight. An important innovation is that students at SCAD colleges spend 15 days a year helping villages to apply sustainable development principles.

Dr Cletus Babu, founder Chairman of the SCAD Group, set the tone for the conference in his speech of welcome. Working with countless volunteers, the environment around Tirunelveli, one of India's 100 Smart Cities, has been transformed. Instead of the desert, Dr Babu saw when he arrived at Cheranmahadi 35 years ago, the sharp edges of the Western Ghat mountains are now covered in trees. Seeds were gathered and then germinated before the monsoon. The result is that the area now get the highest rainfall, while the air is cooled, an inspiring story of what can be achieved when people work together. Greening projects, such as cleaning up the river or the local 'tanks' that store the fresh water, along with building primary schools in some 240 villages, are changing people's lives, and giving hope to people in rural areas.

Fig.3 - Poster at FX University gateway, Tirunelveli


Fig.4 - Women collect purified water from solar powered dispenser


Fig.5 - Trees on the Western Ghats change the climate


Fig.6 - Women's Group near Tuticorin


Fig.7 - Guesthouse on SCAD's Cheranmahadevi Campus

Keynote address: Reforming the Planning System

Dr Shenbaga Vinayaga Moorthi, the Dean of Anna University in Tirunelveli, gave the Keynote Address on the urgent need for more trained planners. Anna University provides technical education throughout Tamil Nadu. The State not only has a population of 82 million, the seventh highest in India, but also has a major concentration of manufacturing such as the motor industry, in the Northern part around Chennai or the second city of Coimbatore. There are some eight mid-sized cities which are now all well-connected by rail, road, and in several cases by air. Hence the prospects for economic growth are good.

Dr. Moorthi used a summary of the report from the Advisory Committee for the Reforms in Urban Planning Capacity in India to highlight the drastic shortage of skilled planners. He warned that unplanned urbanisation could result in serious downsides, and the need to avoid what he called the *'creeping and silent crisis that is overtaking human settlements.'* Bottlenecks like serviced land or traffic congestion are unaddressed because urban planning has not received adequate attention. For example half the 8,000 'urban settlements' continue to be governed as if they were rural entities, and the definition of urban does not reflect the current extent of urbanisation along the main roads.

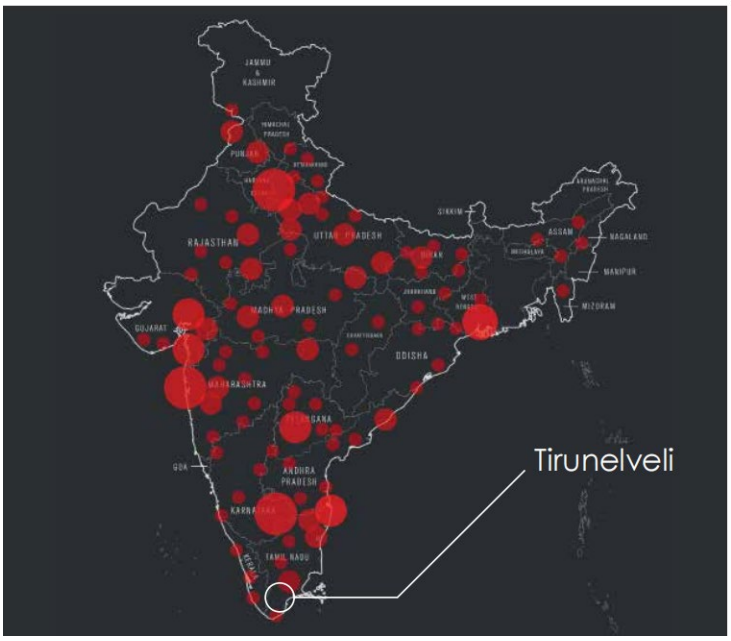
There are problems with property rights. A shortage of some 12,000 town planners with many towns having no qualified staff is made worse by the weak position of the Indian Town Planning Institute (ITPI) despite some 49 educational institutes providing degree programmes in urban and environmental planning. He commented that *'Observing India's urbanisation through Western lens has become a practice....Adopting Western practices without tailoring them to Indian needs is not advisable'*...So what is to be done? Some of the major recommendations of the Advisory Committee were:

- Every city should aspire to becoming a 'healthy city for all' by 2030, and this should encompass the hundreds of small and medium-sized towns as well as those with over a million population.
- Development control should be 'based on scientific evidence to maximise the efficiency of urban land.
- Human capacity should be 'ramped up' which requires many more qualified professionals through capacity building.
- Planning needs to be 'demystified', with a short training programme for elected officials on the benefits, and fair processes for procuring technical consultancy services.
- A 'National Council of Town and Country Planners; was proposed along with a digital platform with the National Urban Innovation Stack of the Ministry of Housing and Urban Affairs.

Above all a consensus is needed that *'a promise to save the environment from the strains of urbanisation is a promise of economic growth in the long-run'*.

Fig.8 - Keynote speech by Dr. Moorthi, Dean of Anna University

CURRENT CHALLENGES FOR SUSTAINABLE GROWTH



Transport: Where should growth be focussed?

Housing: How can sprawl be checked and affordable housing built?

Environment and Public Health: What can be done to improve green open spaces and water security?

Community engagement: How to approach it, what role could education play?

- 8 Cities with a population of over 4m
- 17 Cities with a population of between 2m and 4m
- Over 70 Cities with a population of between 2m and 500,000

1.4b National Population

35% Urbanised population

70+ Cities with less than 2M pop.

Source: The Urbed Trust with Jas Bhalla, Indian Urban Futures Symposium Report 2017.

Fig.9 - Map showing mid-sized cities

Fig.10 - Symposium audience at Indian Urban Futures VI, Tirunelveli

What now for Indian Urban Futures?

Dr Nicholas Falk, Executive Director of the URBED Trust, who sponsored the conference, suggested that planned 'garden settlements' are needed to avoid repeating the past mistakes of urban sprawl or having to live in tower blocks. He recalled studying at Stanford University in California, home of Silicon Valley, which had gone from a success story for start-up to cities blocked by congestion, with huge inequalities. 10,000 sleep on the streets of San Francisco alone. A new village in a forest clearing on the edge of a major city was thwarted by a recession. But 20 years on the plan was implemented. This shows how long innovations can take to be implemented.

So cities should first make the most of their heritage, and avoid pressures to pull every old building down. Planned urban extensions to mid-sized towns, as in the Netherlands, can create attractive places to live. If the land is assembled by a public body, as in Copenhagen for example, Land Value Capture can pay for the improvements in public transport, and turn wasteland into good places to live and work. Britain's failure to build enough new homes has led the new Labour government to set up a New Towns Taskforce to recommend appropriate sites and design principles.

Brian Love, Director of Love Architecture and founder of ConnectedCities showed how development around railway stations could help solve the problems of urban sprawl. Levels of pollution and greenhouse gases are particularly high in India, whereas rail and walking are the least polluting forms of transport. The ConnecteCities approach uses a modern version of Ebeneezer Howard's Garden City ideas to focus growth in walkable areas around rail stations with a good level of service. The ConnectedCities approach could be applied in Tirunelveli, starting with a pilot Smart City Metro using existing

Fig.11 - Nick Falk makes the case for new garden settlements

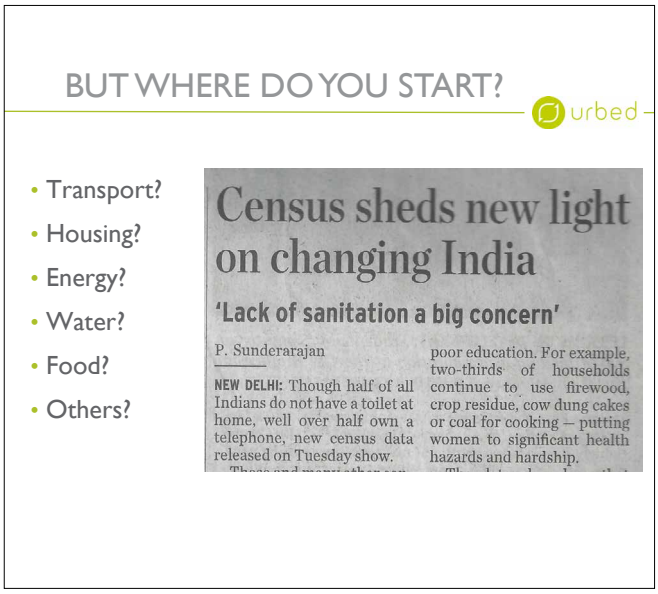


Fig.12 - Key issues for sustainable new garden settlements

Fig.13 - Brian Love argues for using rail to create ConnectedCities

tracks where few trains currently run per day, for more frequent local services. Within 15 minutes travel time of Tirunelveli City development around existing stations could house approximately 200,000 residents, and new towns around new or reopened stations could house a further 200,000 all within walking distance of a station. Growth there would be much less polluting than expanding the edges of towns which are not served by public transport. The World Bank supports such Transit Oriented Development, and Green Growth Funds are starting to invest in such projects.

Prachi Rampuria, Co-founding Director of EcoResponsive Environments presented the concept of 'EcoTopia' focused on an holistic and multi-scalar design approach for the sustainable growth of India's 2nd and 3rd tier settlements emcompassing all layers of development including natural systems, movement networks and the built form. The 'EcoTopia' concept is rooted in climate resilience, economic growth and social equity. Moving from concept ideas to delivery in India requires:

- An integrated approach to spatial planning rooted in local knowledge and expertise requiring training of new planners and associated stakeholders.
- GIS-based identification of appropriate locations for the growth of 2nd and 3rd tier Indian settlements hinged on public transport networks (transit-based growth), natural and social infrastructure.
- Transformation of the Indian policy context and supporting governing structures and resources to align towards the same goal of sustainable 21st century garden settlements.
- Political will to support innovation in finance and tenure that help balance short-term financial 'value' with more longer term social and environmental 'values'.

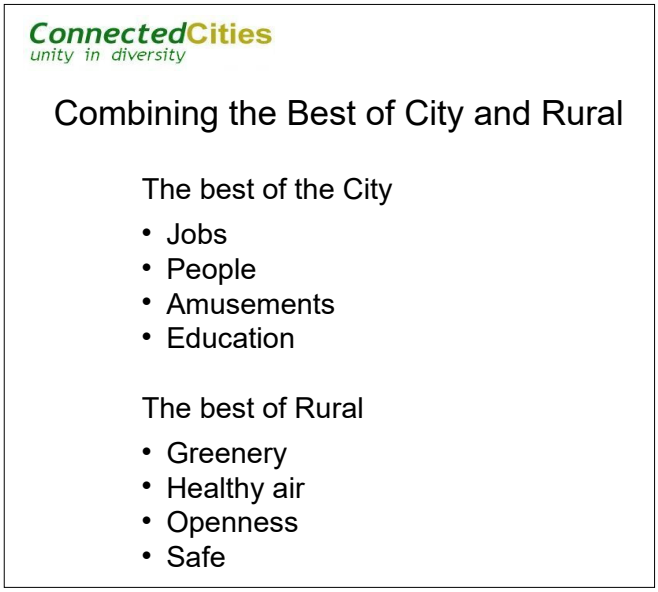


Fig.14 - ConnectedCities combine the best of 'town' and 'country'

Fig.15 - Prachi Rampuria introduces the ideas behind Ecotopia

Fig.16 - Ecotopia illustrates EcoResponsive Environments

The problem is not new!

The drivers for Ebenezer Howard's Garden Cities were identical:

- Pollution and public health
- Dense cities with desperate need for green spaces and access to the countryside
- Rural poverty

Today the world faces exactly the same forces, but now on a global scale.

Fig.17 - Learning from Ebenezer Howard's 'Garden City Movement' (presentation extract). Source: Brian Love

Smarter Urbanism

ConnectedCities proposes using Howard's principles to shift growth to Tier 2 & 3 cities with populations of 500,00 to 1M

Public transport is at the heart of all new development

Growth is focused on cities and towns with good existing rail infrastructure

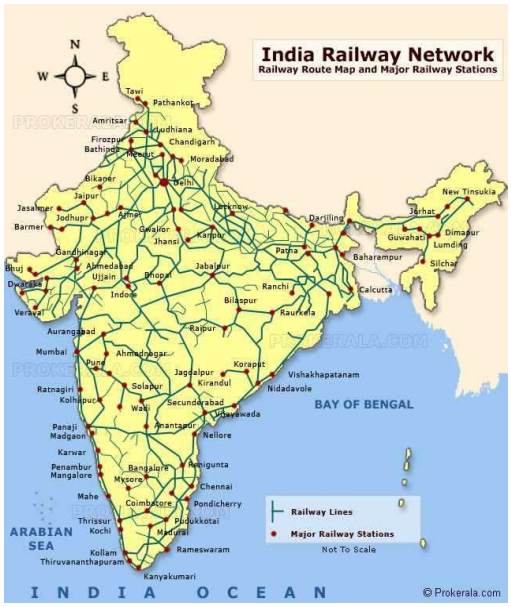


Fig.18 - A 'ConnectedCities' model for Smarter Urbanism in India (presentation extract). Source: Brian Love

The 'ConnectedCity' model

- Dotted gold lines = existing towns
- Gold - 15 Mins around existing stations
- Green - 15 Mins around new stations
- Development only within 1km radius of stations

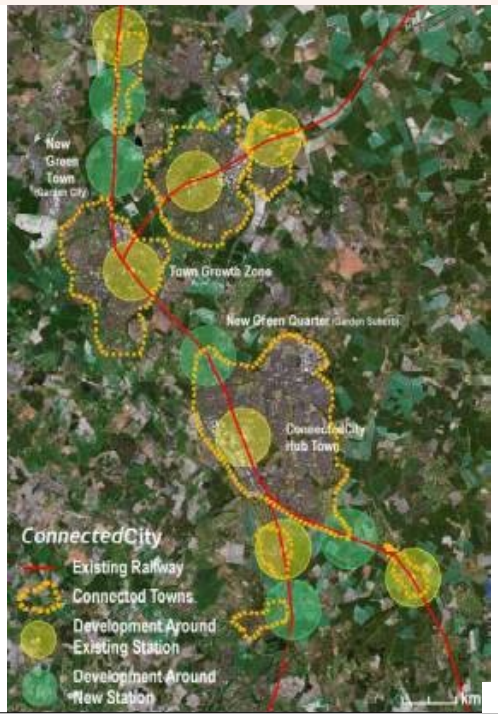


Fig.19 - 'ConnectedCity' model (presentation extract). Source: Brian Love

1 km 'Walkable Neighbourhood' around a station: Densities and Population

1km Radius Pedshed

- 300 hectares
- Population 30,000.
- Density of 100 person/ha UN minimum level for viable public transport
- 10,000 dwellings
- 50% of land green space (public, semi public and private)

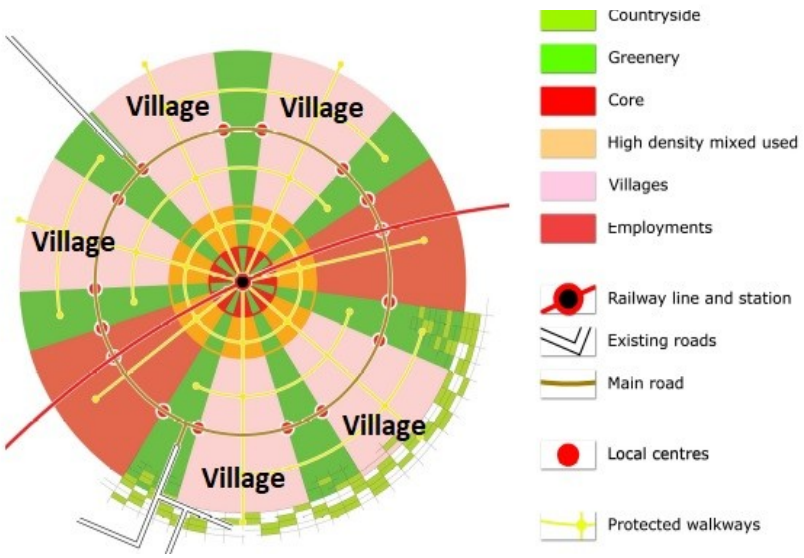


Fig.20 - 'ConnectedCities' as walkable neighbourhoods (presentation extract). Source: Brian Love

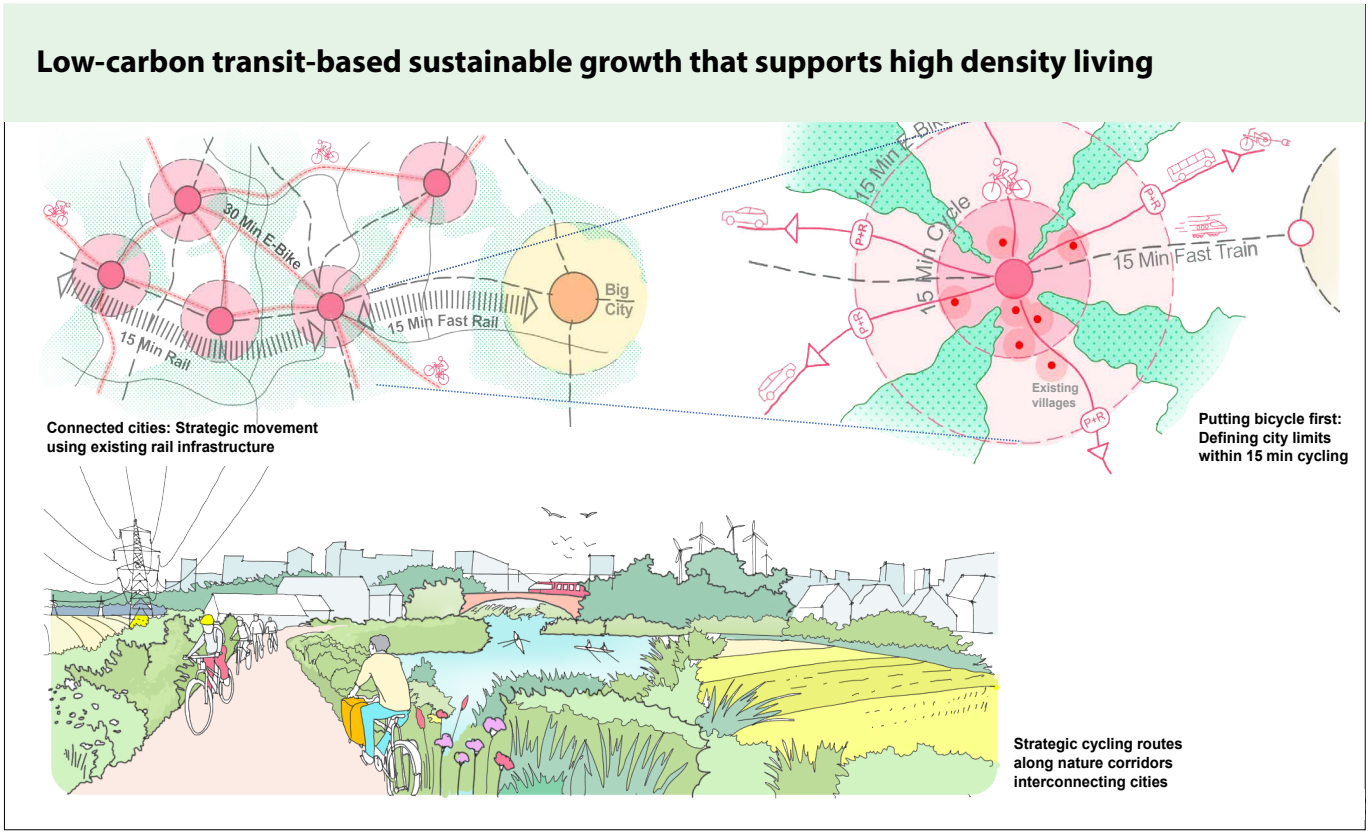


Fig.21 - A model for 'Ecotopia' (presentation extract). Source: Prachi Rampuria

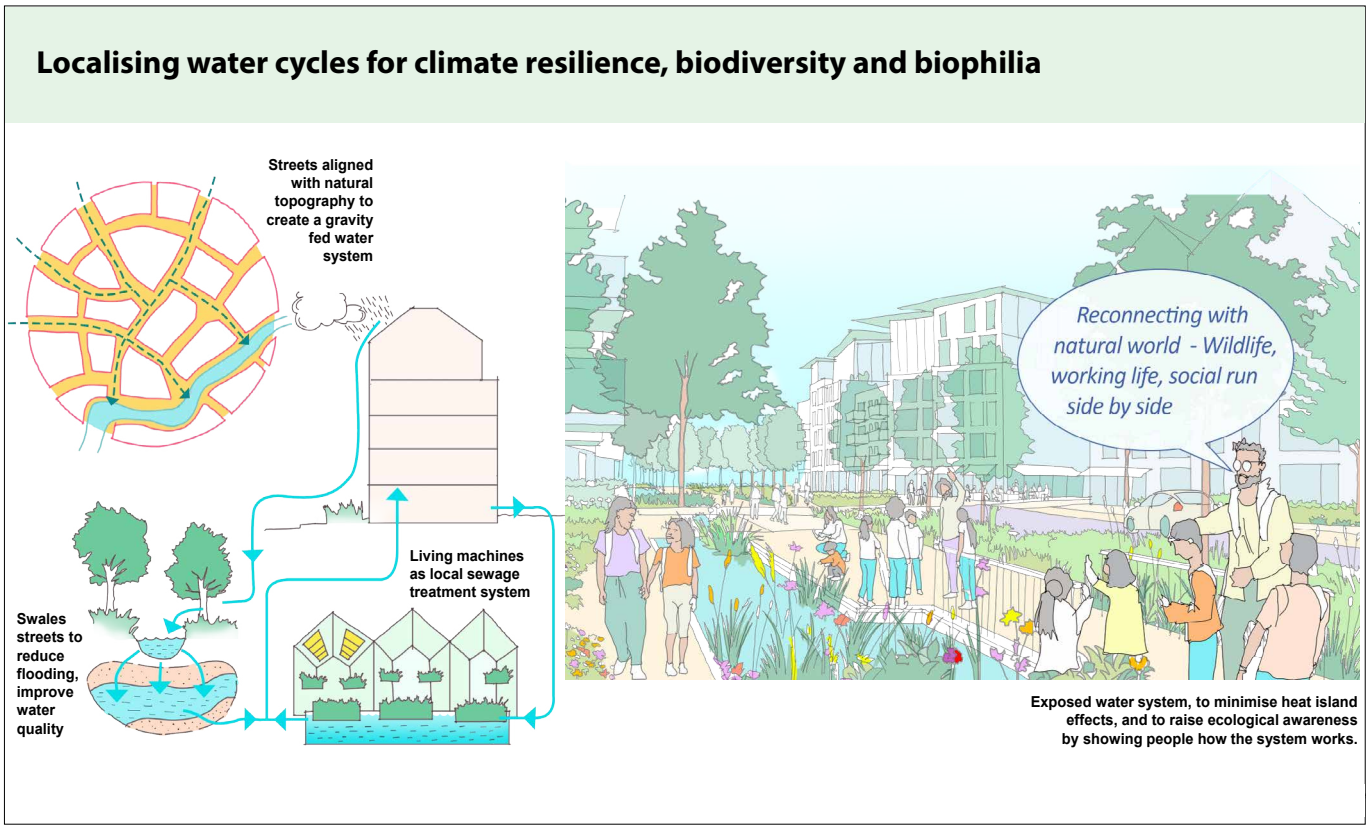


Fig.22 - Designing for water security and climate resilience (presentation extract). Source: Prachi Rampuria

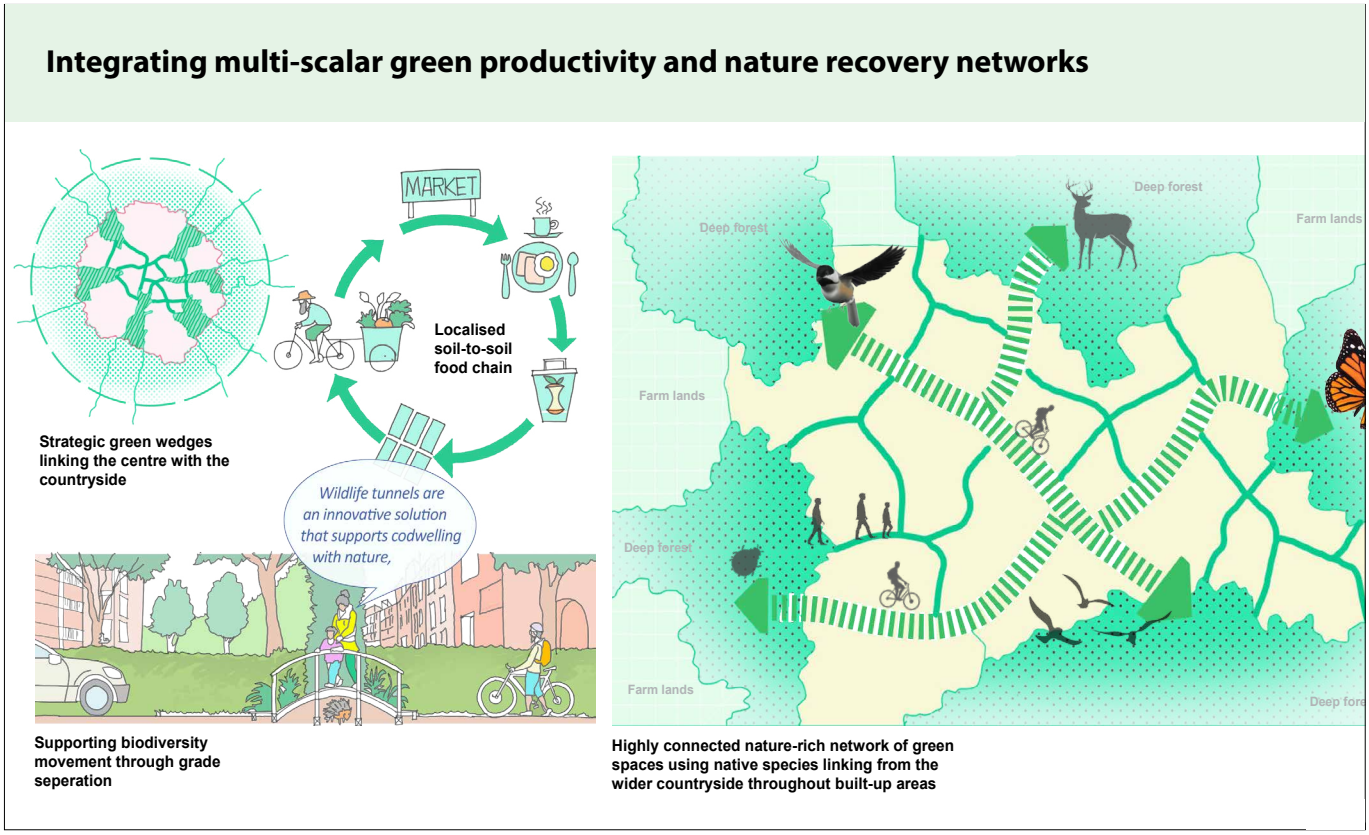


Fig.23 - Designing for ecological sustainability and biodiversity recovery (presentation extract). Source: Prachi Rampuria

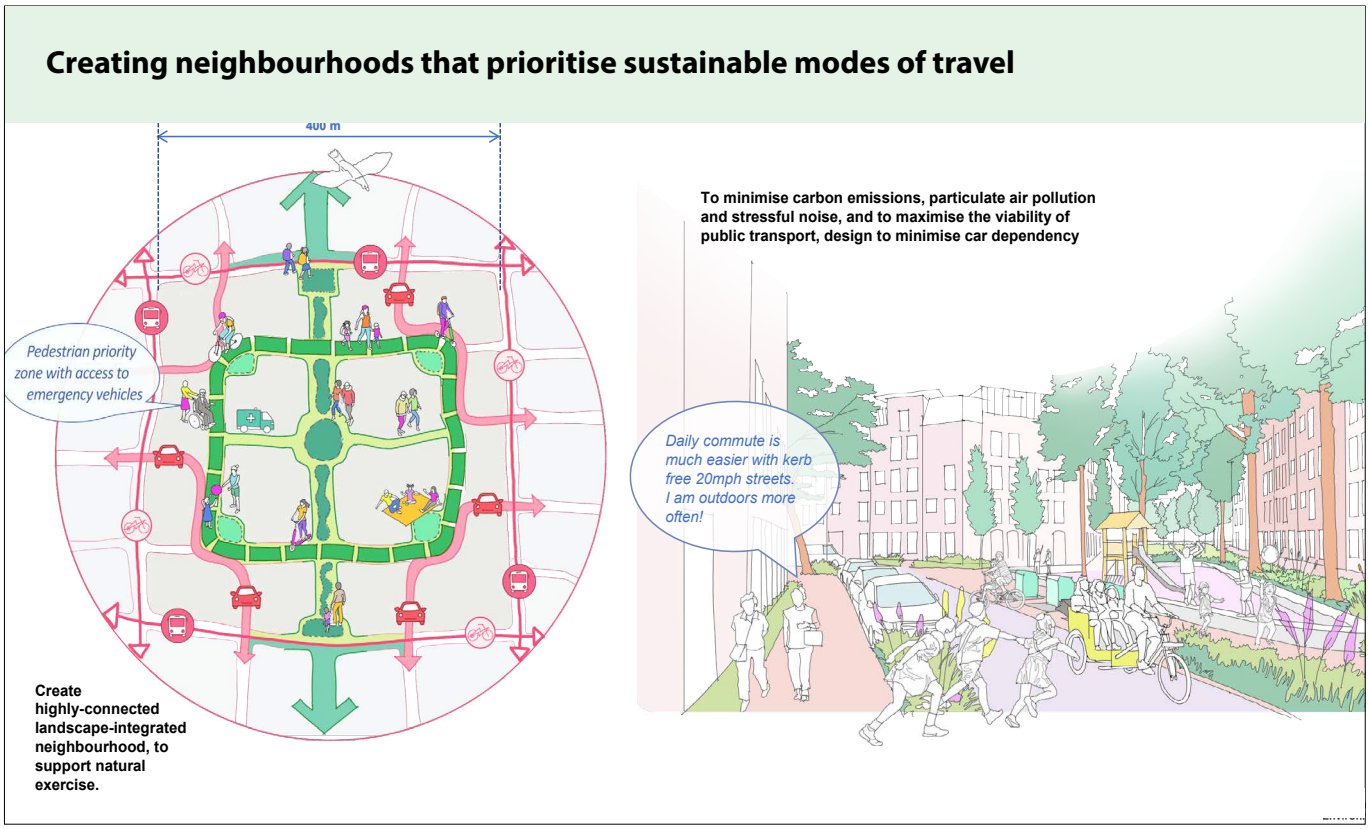


Fig.24 - Designing for active, healthy and walkable eco-neighbourhoods (presentation extract). Source: Prachi Rampuria

Dr Mohammad Firoz, Head of Department for Architecture and Planning at National Institute of Technology, Calicut in Kerala, is leading the first Regional Centre for Excellence for planning and design covering the Southern part of India. His presentation addressed the theme of creating family friendly cities.

Over time people in India are moving from villages into cities. These need to cater for all ages and for the poor as well as the rich if they are to be sustainable. To respond to the concerns of women as mothers means creating places that are 'family friendly'. Regrettably many Indian cities are failing, and have become dominated by traffic. But some, like Pune are starting to match the best that can be found in Western cities such as the Dutch city of Amsterdam. His presentation showed how cars can be excluded at weekends, and multiple uses introduced in public spaces.

To this end, planners and planning have an important role to play. The first step is to map all the main facilities such as schools and hospitals, as well as areas where children can play safely. Distances and times to walk to them can also be mapped. Gaps and the lack of facilities can then be identified, as is being done in parts of Kerala. To create family-friendly cities, engineers will need to learn some of the skills of planners and designers.

Smritika Srinivasan, Senior Associate at the Institution for Transportation and Development Policy (ITDP) India, based in Chennai presented the case for creating healthy streets for a sustainable future. 1/3rd of trips in Indian cities are on foot but there are few footpaths, and not enough modern buses Cities need to prioritise mobility for vulnerable people, not cars.

New developments need to be compact and walkable. This means creating places where people come first. Development should also

Fig.25 - Dr. Mohamed Firoz calls for 'family friendly cities'

Fig.26 - Resilience depends on a number of systems

Fig.27 - Smritika Srinividans shows how to make cities walkable

be prioritized around transport nodes, and not allowed to sprawl. Mixed uses and healthy streets require a number of design features, for example making intersections compact and designing tree lined streets (which would also aid in decreasing the ambient temperature), with equitable distribution of space ensuring pedestrians and cyclists can move safely and comfortably. Good practices, for example in Chennai, Pune and Pimpri Chinchwad need to be used in training teams in smaller cities.

Albert Raja, Assistant Planner Chennai Urban Metropolitan Transport Authority (CUMTA), argued that cities should provide opportunities for all through investing in public transport. He explained the work that planners were doing to produce an integrated transport system for Chennai's metropolitan area that would cut travel times to the furthest point from two or three hours to less than 45 minutes. An inter-departmental group called the Chennai Brainshop brought the different sections together. The population was projected, and employment corridors identified.

Chennai currently has a population of 15 million out of a state total of 97 million, which is expected to grow to 132 million in 40 years with migration accounting for a third. The growth strategy includes both densification or vertical development and planned horizontal extensions, applying the principles of Transit Oriented Development. Ring roads and growth centres are being built on the edge. Four new growth points are being added to the existing five The priority is to make the most of the extensive rail system, including new Rapid Rail Transit to supplement the buses, metro and suburban rail.. Integrated ticketing will make multi-modal trips easier.

Fig.28 - People-centric and healthy places rooted in active travel

Fig.29 - Albert Raja presents Chennai's transport corridor for growth

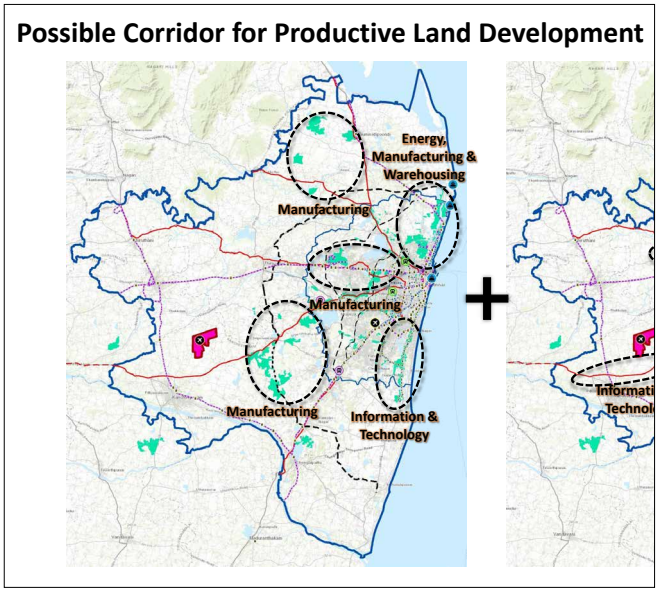


Fig.30 - Corridors for sustainable land development

Fig.31 - Family friendliness in Indian towns and cities (presentation extract). Source: Dr. Mohammad Firoz

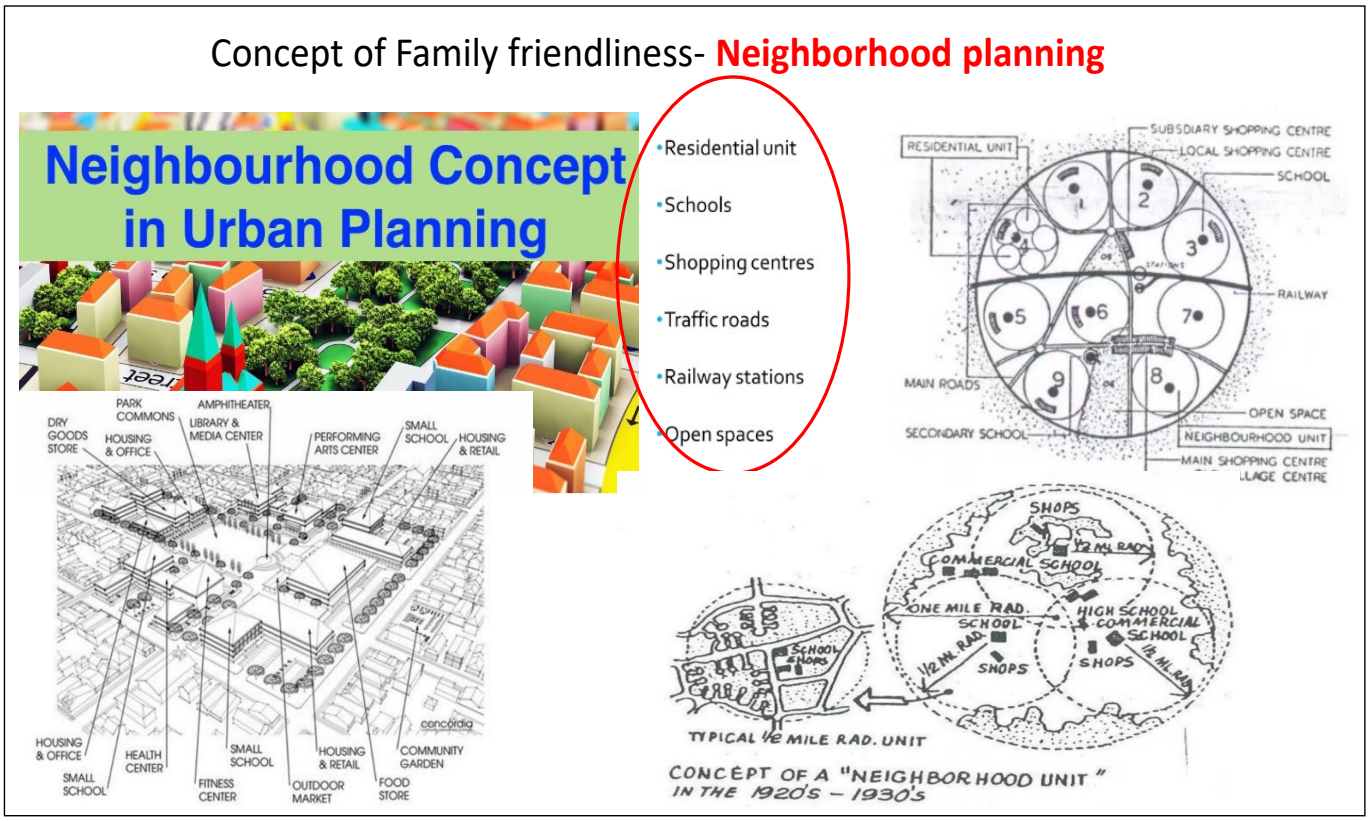


Fig.32 - Cencepts of neighbourhood planning to support family friendliness (presentation extract). Source: Dr. Mohammad Firoz

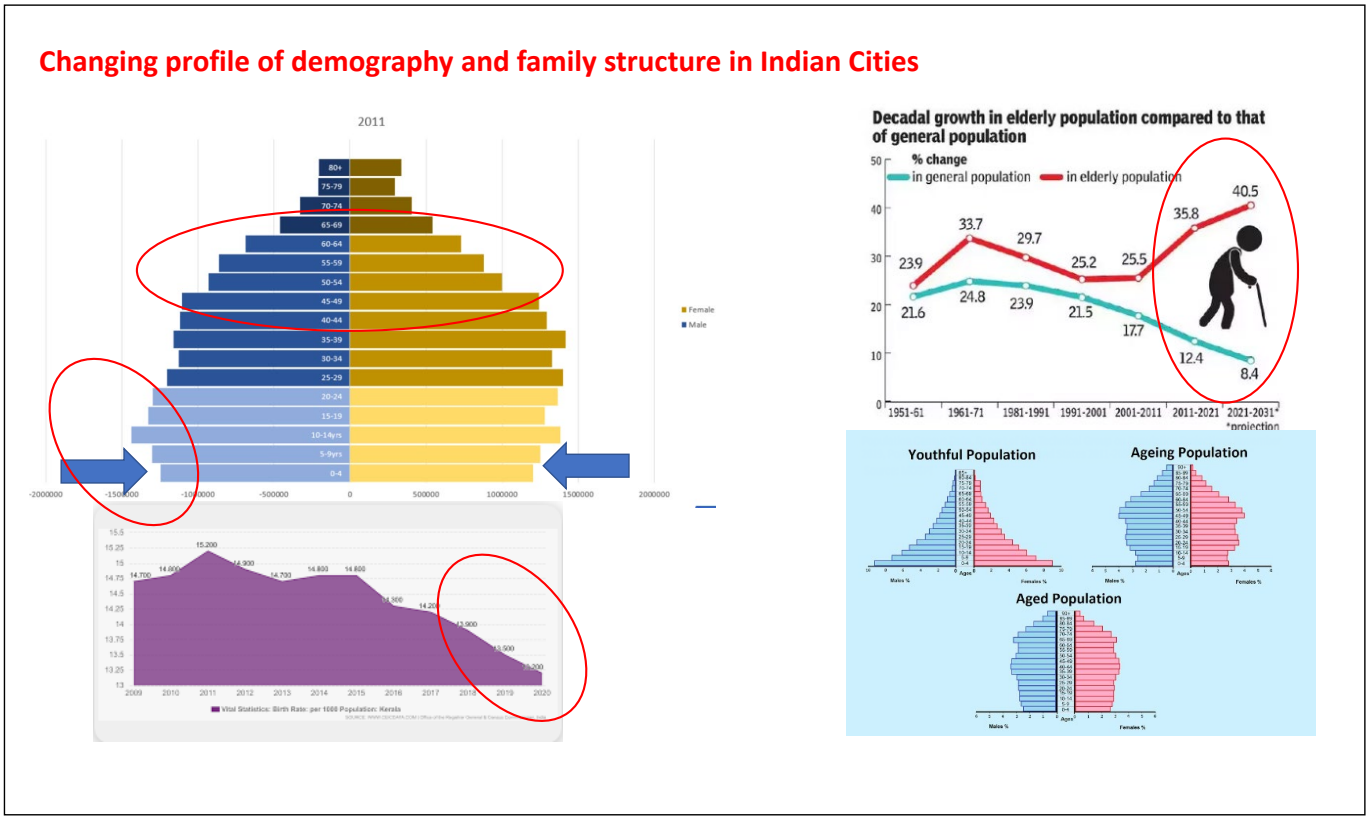


Fig.33 - Impact of changing demographics profile and family structure in India (presentation extract). Source: Dr. Mohammad Firoz

Fig.34 - Rooting family friendliness in walkable, active neighbourhoods (presentation extract). Source: Dr. Mohammad Firoz

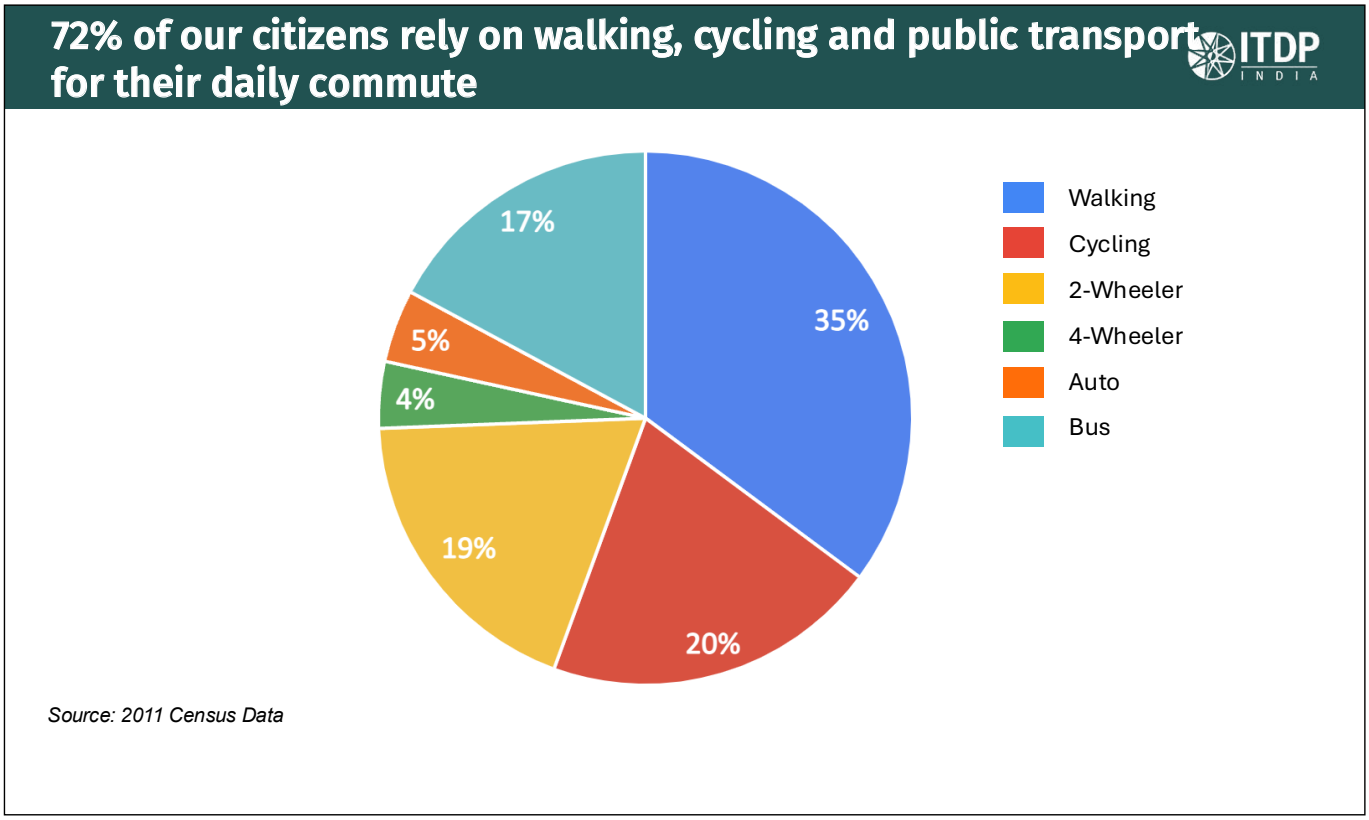


Fig.35 - Sustainable modes constitute majority of commute journeys for Indian cities (presentation extract). Source: Smritika Srinivasan

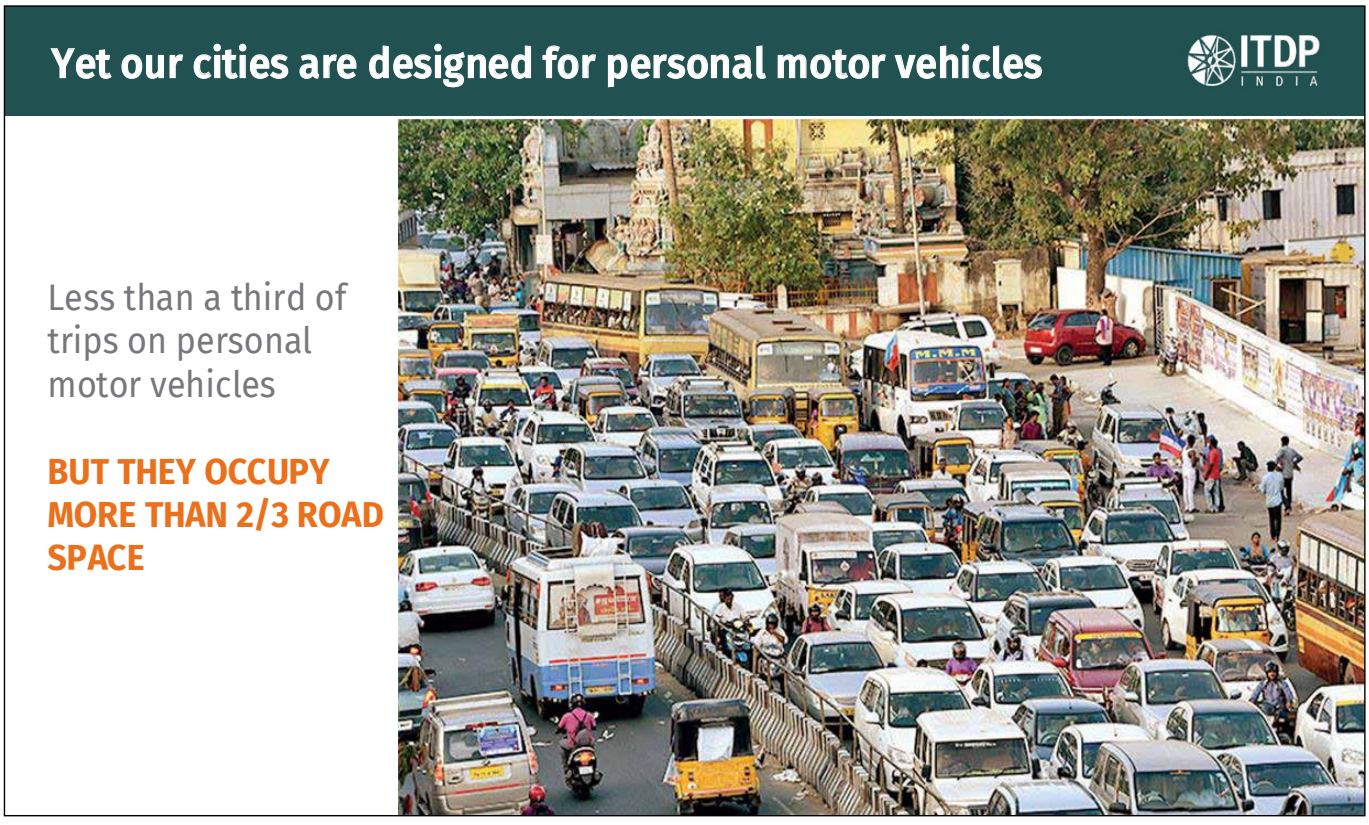


Fig.36 - Despite sustainable modes used by majority, Indian cities are designed for cars (presentation extract). Source: Smritika Srinivasan

Fig.37 - Principles for healthy streets and placemaking (presentation extract). Source: Smritika Srinivasan

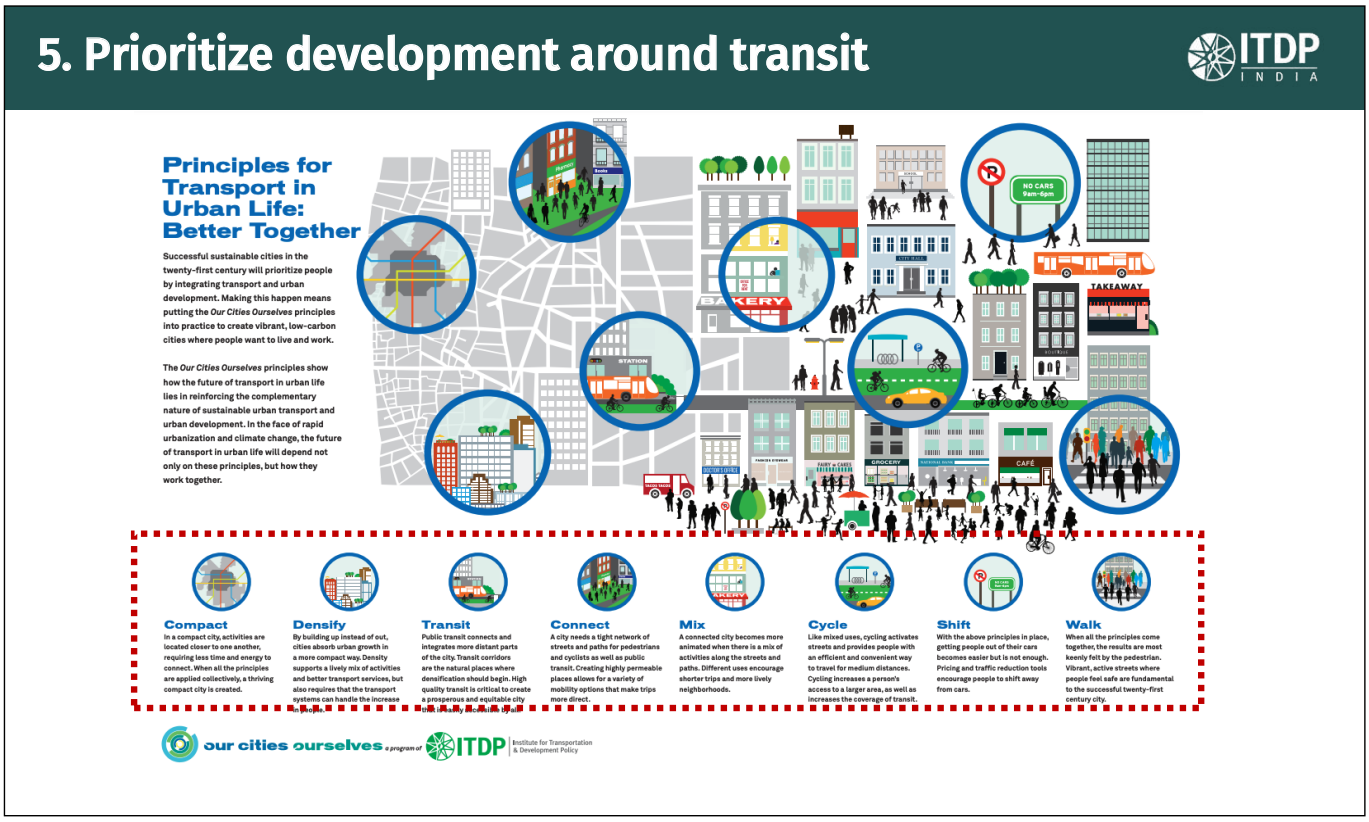


Fig.38 - Sustainable mobility for India to be rooted in public transit networks (presentation extract). Source: Smritika Srinivasan

Mr M Mathivanan, Senior Research Associate and Coordinator, Agasthanamalai Community Conservation Centre, gave the final presentation, drawing lessons from work on the social-ecological systems of the Tamiraparani River. His organisation Ashoka Trust For Research In Ecology And The Environment (ATREE) combines research with practical action at the grassroots.

The Tamiraparani River runs for about 126 kilometres through five distinct habitats from its origins in the Western Ghats to the Bay of Bengal. It is the only perennial river in Tamil Nadu, and forms part of their cultural heritage. It is also a crucial source of irrigation for agriculture and fishing, though the amount of land given over to rice production in Tirunelveli has fallen.

Industry is taking increasing amounts of water, and there is a reducing flow downstream. Encroachment, pollution and degradation impact on people's quality of life. His final slide set out ten strategies for revitalisation, which included drawing lessons from the River Thames in the South East of England.

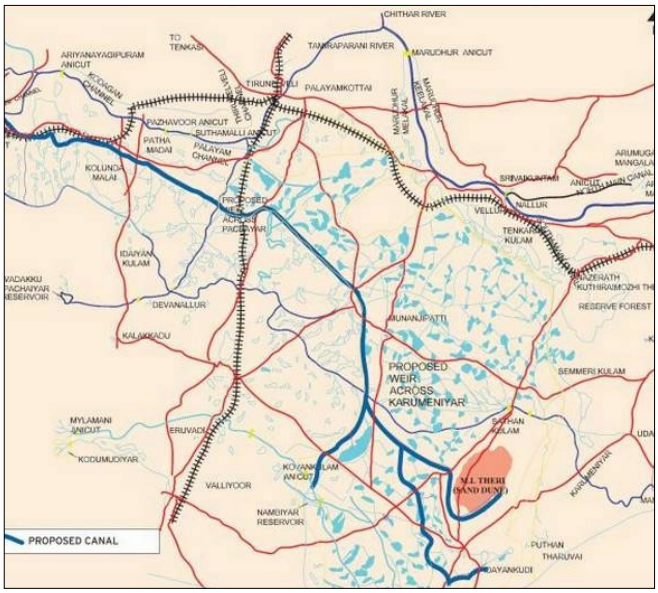


Fig.39 - Mr. Mathivanan presents socio-ecological systems of Tamiraparani River

Fig.40 - Strategies for riverine ecosystem revitalisation

Conclusions

The Symposium highlighted the role of integrated planning in shaping livable, resilient and sustainable cities. It concluded with a discussion on how to translate these ideas into impactful and practical action on-ground for the Indian context. As part of the way forward key action areas are:

Developing a pilot project
Pilot projects provide useful subjects for action research and help create an evidence base to demonstrate potentials for innovation and implementation of good practice. To this end, in collaboration SCAD and other local partner organisations, agree on the scope of a pilot 'action research' project to develop a comprehensive development plan for an existing rural settlement or cluster of villages with potential for transit-based growth (village/town) in Tamil Nadu.

This should demonstrate how ecotopian design encompassing the environmental, social, economic and governance aspects can be translated from theory to practice. This action research pilot project exercise should also demonstrate how such a holistic development framework could be scaled up for sustainably growing larger 2nd and 3rd tier Indian towns.

Enabling shared learning
Building sustainable and healthier neighbourhoods is of vital importance to the future growth of Indian cities and the quality of life of their inhabitants. To this end, in collaboration with partners such as the Department of Architecture and Planning at the National Institue of Technology in Calicut recognised as a Centre for Excellence in Urban Planning and Design by MoHUA, Govt of India, explore how knowledge exchange programmes between UK and India for the training and upskilling of all built environment stakeholders, in particular, policy makers, local muncipalities and urban planners can be further supported.

Creating cross-national partnerships
Though the circumstances are different, cities and towns in both India and the UK face similar challenges within the built environment sector to address climate change and equalise opportunities for all. Therefore, working with our partners support the creation of synergic partnerships between UK and Indian institutions that focus on collaborative research on sustainable development and issues of common interest.


Fig.41 - Audience discussion on way forward and key barriers


Fig.42 - Call for transformation in government structures to support sustainable development

Relevant websites for more information:

www.urbedtrust.com/indian-urban-futures/
www.nirmantrust.org.in/
www.connectedcities.org/case-studies/tirunelveli-india
www.ecoresponsiveenvironments.com

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