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## **Planning Times**

PEOPLE, PLACES AND POLICIES

Issue 05 • April 2023

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The Art of Selling Oneself

n my early academic life, I used to tell myself, "Karthik, you need to push yourself for 60 hours a week to consistently advance in your career." I always aimed for the best outcome, wanting to do my best to earn the best, whether it was a simple ten-mark test or a research thesis.

When I stepped foot into the professional arena, I observed something strange. People who worked similarly to me or even harder than me struggled to keep up in the unforgiving and competitive work environment. Meanwhile, another group of people who worked way less were in demand like hotcakes! What distinguished the former from the latter, I realised, was the key trait of being able to *sell themselves*.

By selling yourself, you can attract the attention of people a mile away. Aside from advancing your career with confidence and creativity, you will also be less harsh on yourself. Even if you make mistakes or take some time off, you can skillfully convert it into an advantage. It's not just about your hard work but also people knowing you work hard.

We hope you enjoy the April edition of the Planning Times magazine! The team at Planning Times has covered a variety of topics, ranging from environmental jurisprudence and human rights to the concept of centrality and Transit Oriented Development (TOD). In this issue, we are concluding our interview with Oneistox, and have also featured an article on innovation in climate financing by NIUA. Thanks for reading, and we hope you have an inspirational moment or two.



Here's to the creativity you'll craft from our magazine!



Karthik Girish Chief Editor (editor@planningtimes.com)



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POLICY

## The Legal Leaf

#### The relation between environmental jurisprudence and human rights

BY NANCY GROVER

ENVIRONMENTAL LAWS and human rights go hand in hand as both share the common aim of well-being of humanity by recognizing human rights. Various international and national government and organizations have recognised the interrelation between environmental law and human rights as it is concerned with the promotion and development of human wellbeing. Furthermore, both human rights and environment protection are linked because both are required for better quality of life. Right to life is a fundamental right and when courts interpreted and widened the scope of right to life, right to live in clean environment also got included in it and this is how environment law and human rights are connected.

RESULTS of international conferences. summits and rulings various tribunals of considered human rights as an effective tool to protect environmental rights and duties. The fact that a healthy environment is essential for the fulfilment of human rights has been widely recognised by various international bodies across the globe. The protection of basic human rights is the duty of the state and protection and conservation of environment is essential for enjoyment of basic human rights including the right to life. Proper laws and legislation are important means to check and ensure the practice of

these basic human rights.

The serious efforts for the protection of environment began 1972 onwards. Following the Stockholm declaration in 1972, various efforts have been made at international level for the protection and conservation of environment, some of which have been discussed below.

#### STOCKHOLM DECLARATION

(1972) marks a landmark year in the history of environmental laws as the Stockholm declaration established an important interrelation between environmental law and human rights. In this UN conference, declaration on the human environment was adopted to bring humankind closer environment. to After this declaration, UNEP was set up which is а dedicated organization for the protection of human rights and environment. **RIO DECLARATION** (1992) a set of principles sustainable for the development was adopted, these principles define the right of people to live in healthy environment and their responsibility

to protect the environment. Declaration established an important link between right to development and right to live in healthy, clean, and sound environment and endorsed the interdependence of all human rights and environment protection. Rio declaration is an important milestone in the history of environment law that set a new agenda for sustainable development

WORLD SUMMIT ON SUSTAINABLE DEVELOPMENT (2002) was held in Johannesburg with idea to focus the world's attention to sustainable growth for the better future without compromising the present need. The main issues discussed included gender equality, democratic society, good governance and enhance international cooperation for protection of environment.

Besides these conferences, progress has been made in various other forms by international organizations, human right bodies and special agencies have been working for the betterment of world and environment.

Right to clean and safe environment has been included in Indian Constitution under Article 21 of Right to life. It is made clear by the constitution that environmental rights and human rights are essential for each other and states that every person has fundamental right to live in a clean environment. Importance of environmental law is mentioned in Directive Principal of State Policy under Article 48a which states that state must try hard to protect and preserve the environment. Indian



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Right to clean and safe environment has been included in Indian Constitution under Article 21 of Right to life. constitution focuses not only on the interrelation between human and environmental rights but also makes sure that measures must be taken by the state to sustain and protect the flora and fauna of the country. Indian Constitution clearly mentions that clean and safe environment is not only a fundamental right of the citizens but also their fundamental duty. Through article 51(g) of the Indian Constitution, it has been stated that it is the duty of every citizen to protect and preserve nature of the country in form of forests and water bodies along with not doing harm to any wildlife. Indian Constitution, very elegantly, lays down the interrelation between environmental law and human rights. In Sachidanand Pandey v. state of West Bengal, supreme court illustrated that whenever problems and issues related to environment comes before court, the court is bound to consider two articles article 48(A) and article 51A(g).

Although numerous legislative steps have been taken to protect environment and basic human rights, courts, and tribunals play an important role in interpreting the legislature and development of environmental jurisprudence. Indian judiciary plays an essential role in protection of fundamental rights of the citizens. There are various judgements that clearly highlights the role of judiciary in protection and conservation of environment. In Francis Coralie Mullin vs. Union Territory, supreme court held that right to life under article 21 of Indian constitution includes right to live with human dignity. In M. C. Mehta vs. UOI, supreme court held that life, health, and environment have priorities over unemployment and gives more importance to environmental problems. Right to a wholesome environment was included under right to life in article 21 by supreme court judgment in Charan Lal Sahu case. In a landmark case of Subhash Kumar vs. State of Bihar, supreme court held that fundamental right to life under article 21 of Indian constitution includes right to live in pollution free and clean environment and enjoyment of pollution free water and air for full enjoyment of life.

The Indian judiciary played a remarkable role to raise the environmental issue and protect the rights to citizens and including right to clean and healthy environment in the framework of fundamental rights to provide remedies to the victims of environmental law. There is a long list of cases in which supreme court recognized the right to healthy and sound environment as a part of human right and provides remedy to the victims under environmental law.

The judgements of landmark supreme court cases mentioned above have been discussed in detail below.

#### **M.C. MEHTA VS. UOI (1988)**

In this case, the court gave judgement in 1988 and stated that the petitioner was someone who was interested in protecting people who were using the water and so he could file a petition to enforce statutory provisions against the mahapalika and other officials involved. The court indicated that polluted water could lead to several water borne diseases which are harmful for people and held industries responsible for the proper treatment and discharge of waste. Furthermore, it held mahapalika responsible for not taking up any steps for prevention of water pollution and issued directions for immediate actions. The court asked the central government to issue books free of cost in order to increase the knowledge regarding the environment of the general public. The judgement is still considered as



one of the major rulings in the field of environmental law in our country and has been interpreted in various ways for cases later. The stances laid down in this case are still being used by the court. Hence, this case served as landmark ruling in the history of Indian Judiciary as it was not all about the rights of people, compensation, and economic losses but the case also brought in front of the entire country the seriousness of environmental issues.

#### SUBHASH KUMAR VS. STATE OF BIHAR (1991)

In this case, it was found that the petitioner was an influential businessman and has obtained a license for coal trading, he tried to put pressure on the Respondents to supply him with more quantity of slurry, when the Respondents denied him, he started harassing the respondents. The court found out that the State Pollution Board had indeed taken effective steps to check pollution and prevent the discharge from the factories into the river and thus dismissed the petition filled by the petitioner under public interest. While it was concluded that that the petitioner flied this case due to his personal grudges and issues under the title of public interest, the interpretations by the Supreme Court over the years have become the basis of the environmental jurisprudence, which have served the masses; as right to life is a fundamental right provided under article 21 of the Constitution and guarantees a pollution free environment.

Human rights are clearly affected if there is failure in protection of healthy environment. The relation between human rights and environment not only helps in sustainable development but also strengthens the human right system and enables the expansion of its scope in the field of environment. The interlinkage between human rights and environment ensures that the human rights are protected eventually when the environment is protected. In India, the courts are extremely cautious about the environmental and human rights, considering the fact that loss of nature cannot be replenished. In India, judiciary tries to bridge the gap and link human rights and environmental laws. However, it is well evident that the environmental problems persist and we have a long way to go till we reach the desired stage.

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The relation between human rights and environment not only helps in sustainable development but also strengthens the human right system and enables the expansion of its scope in the field of environment.



CITIES



This is a three-part series covering the concept and need for child friendly cities (CFCs). In part two, the author discusses understanding children's need through lens of Urban Planning.

BYAAKRITI

**THE MAIN AIM** is to look at children's needs in a comprehensive manner through the lens of urban planning and design. The example discussed is in Indian context but very well applicable all over the world to understand the situation. The idea is to examine and analyze existing information on children in urban India across the following thematic areas: (as defined in "Status of Children in Urban India" GOI-2016)

**Demography:** Children's population in urban areas, sex ratio, differently-abled children, vulnerable children (homeless, migrant children and children living in slums)

Health, education and nourishment status: Access to education, status of health (mortality rate, impact of water and sanitation on health), status of nourishment (types and reason for malnourishment) Living conditions (and its impact on children): Condition of housing, density, access to safe drinking water, sanitation facilities at household and school level, access to play areas and amenities

Mobility, safety and security: Safe mobility, crime against children, child protection, disaster risk reduction

Legal provisions for child development: International initiatives (UNCRC, Child Friendly Citv initiative. Sustainable Goals): Development National Initiatives (Constitutional provisions, legislations and national policies and plan of actions, provision for children in urban missions/ development urban programs)

To fight for creating child-friendly practices, it becomes imperative to look at issues such as children's participation in decision making, child-friendly urban planning





frameworks, and safety standards for children, guidelines on quality of built and spatial environment and provision of equal opportunities for the differently-abled. So it implies that for moving towards the positive side, the negative side must be identified. Key areas of concern have been identified for determining the future areas of intervention for creating child friendly cities. Also an attempt to establish the relevance between children's needs and urban development by addressing specific questions has been made, these questions include:

- How has the lack of infrastructure and basic services affected the development of children in India?
- What are the factors affecting children due to poor planning practices?
- How inadequate open areas and lack of opportunities in education affecting children?
- Do the children feel safe and secure in their natural environment?
- What obstacles need to be cleared to make Indian cities friendly for children?
- What are the key aspects regarding which interventions can be made for creating cities for children?

**KEEPING IN MIND** children's perspective and the arising implication, the study tries to elaborate the issues that hamper the growth of children and pose as barriers in creating child friendly cities. Further some of the arguments are also raised which highlight the implications of the whole scenario. А comprehensive approach is adopted for achieving the objectives. The sections below define the basic issues of children and try to identify the most vulnerable group of children. There is a separate section that defines the issues with respect to study on concerned focus groups too.



An approach is needed towards uplifting of precisely those children who are hardest to reach, or maybe their problems are hardest to solve.

MAINSTREAM **APPROACHES** development many-a-times to view all children in urban areas as a homogeneous group and use statistical aggregates to determine resource allocation for them altogether. An approach is needed towards uplifting of precisely those children who are hardest to reach, or maybe their problems are hardest to solve. According to a baseline study regarding "Status of Children in Urban India"-2016, It is estimated that about 40 per cent of children in India live in difficult circumstances which includes children without family support, forced into labor, abused/trafficked, homeless, affected by abuse etc. Survival, growth, development and protection of these children hence need utmost

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Every such child misses opportunities because when the city fails to extend services that would enable them to develop as productive individuals, it ultimately loses the social, cultural and economic contributions they could have made, had the services been provided. priority. Every such child misses opportunities because when the city fails to extend services that would enable them to develop as productive individuals, it ultimately loses the social, cultural and economic contributions they could have made, had the services been provided. Urban local governments in India must ensure that such children receive greater attention, owing to the fact of being their sole guardian. Therefore the study too includes the children of all classes but primarily revolves around the aspects of vulnerable ones among them.

THE CENSUS OF INDIA defines a slum as "a residential area where dwelling units are unfit for human habitation owing to dilapidation, overcrowding, faulty arrangements and design of such buildings, narrow or faulty arrangements of streets, lack of ventilation, light or sanitation facilities, or any combination of these factors detrimental to safety and health." In urban India, 65.5 million people live in slums and constitute 17.4 per cent of the population. Out of this, 8.1 million (12.3 %) are children in 0-6 years age group (Census, 2011). Thus a significant proportion of the urban population inhabits unplanned and deprived areas. Children's health is majorly determined by the conditions in which they are born, grow and live. They are excluded from essential services and social protection, a right which they fail to exercise. Inadequate access to safe drinking water and sanitation puts these children at increased risk of illness, malnutrition and sometimes, even death.

**CHILDREN RESORT** to living and working on the streets for various reasons like violence or abuse at dwelling places, and many-a-times the reason is poverty. Children whose poverty and marginalization leave them with few choices often see the street as the best available option for escape. But living on the street exposes them to violence and harsh living conditions. As per the 2011 census, India has 1.77 million homeless people out of which 0.27 million (15.3 %) are children in 0-6 years age group. Considering urban areas, 0.94 million (52.9 %) of homeless people reside on streets, out of which 0.11 million are children in 0–6 years age group. These children constitute 41.7 per cent of the total homeless children population in India and 12.0 per cent of the total urban homeless population. (Census, 2011)

INDIA HAS 7.86 MILLION differently-abled children in the age group of 0-19 years. Of these, 2.27 million (28.9%) are located in urban areas (Census, 2011). Considering accessibility, in spite of existence of laws and regulations for providing and promoting safe mobility, Indian cities lack universal accessibility leading to prohibition of differently abled children and their families from fundamental rights and basic amenities. Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act 1995, Sections 44, 45 and 46 categorically provide for "nondiscrimination in participation, non-discrimination of the roads and built-up environment." The obstacles faced by the differentlyabled come in many pretexts and are found in many facets of urban life. The fences faced by differently-abled children are compounded because of the environment in which they live. Lack of access to public transport system, poorly designed traffic crossings and streets and lack of parks or play areas are only some of the challenges faced by differentlyabled children of urban areas.

MASTER PLAN

# The Evolution of Neighbourhoods

#### BY TSOMO WANGCHUK

Delhi, the capital city of India, has undergone significant transformations over the past few decades with the implementation of various master plans. One of the key aspects of these plans has been the concept of neighbourhoods, which aims to create self-sufficient and sustainable communities within the city. In this article, we will explore and compare the neighbourhood concept of three Master Plans of Delhi (MPD), namely the Master Plan 1962, 2001 and 2021. We will delve into the evolution of the neighbourhood concept and analyse how it has been interpreted in each Master Plans.



**BY ANALYSING** the similarities and differences between these plans, we can gain insights into the evolution of urban planning in Delhi and the effectiveness of the neighbourhood concept in achieving its goals.

The origin of the neighbourhood unit as a concept can be traced back to the 19th century, when several scholars were exploring ways to enhance the quality of life. But it was Clarence A. Perry (1929) that led to the promotion of 'neighbourhood unit' as a comprehensive planning tool, to be utilised for designing self-contained residential neighbourhoods.

According to MPD 2021, "the pattern of a community module is conceived as residential area containing а 'neighbourhood' secondary school with senior and shopping facilities for dayto-day needs." The concept of neighbourhood is, therefore, an integral part of urban planning, and it plays a crucial role in shaping the physical, social, and economic aspects of a city.

The concept of neighbourhood has been an essential component of Delhi Master Plans over the years. Although the term was not used in Master Plan 1962, it did focus on the principle of decentralization and was prevalent in MPD 1962's hierarchy of urban development as 'Residential Planning Area'. The term 'neighbourhood' was first introduced in Master Plan 2001 and has since been a significant part of Delhi Master Plans. **AS CAN BE** seen from table 1, the neighbourhood planning area comprised of three levels in MPD 1962 and 2001. The lowest level of 'Housing Cluster' was not included in MPD 2021, thus comprising of only two levels of neighbourhood planning hierarchy in 2021 plan. It can also be seen that the population of a neighbourhood area reduced from 15,000 in MPDs 1962 and 2001 to 10,000 in MPD 2021.

**TABLE 2** below gives an overview
 of the facilities along with the number of units and their area in the neighbourhood planning area. The higher level of additional facilities is to be provided at Community, District and Zonal/sub-city levels. The standards set in the table shows the decrease in the number of units of facilities as well as their area over the three MPDs. For example, the number of Primary School to be proposed reduced from 4 (MPD 1962) to 3 (MPD 2001) to 1 (2021), and the number of Convenience Shopping reduced from 18 (MPD 1962) to 3 (MPD 2001) to 2 (2021).

Further, several facilities were added in neighbourhood level over time. In MPD 2001, facilities such as Milk Booth, Religious Buildings, Library, etc. were added and a few more facilities such as Banquet Hall, Neighbourhood Play Area, Anganwari, Coaching Centre, etc. were incorporated in MPD 2021. Though more facilities have been added at Neighbourhood level in MPD 2021 but area given to them has reduced. For example, per unit area of senior secondary school was 1.6 ha in MPD 2001, however the area proposed reduced to 0.8 ha in MPD 2021.

**THE UTILITIES** at neighbourhood level in MPD 2001 consisted only of Electric Sub- Station. However, in MPD 2021, other utilities such as Dhalao, Underground Water tank and Local Level Waste Water Treatment facility were included. The priority on recreation spaces area of 0.3 ha each. However, MPD 5001 and 2021 bifurcated them to 5007 Tot Lot, Housing Area Park, Housing M

Area Playground, Neighbourhood Park and Neighbourhood Play Area with individual areas depending on the level of facilities as can be seen on the table.

also changed over time as can be

seen from the change in facilities for

green spaces. The MPD 1961 noted

facilities of Tot Lot, Playground,

Park at neighbourhood level with an

**IT IS ALSO** important to note the change in total neighbourhood level facility area over the three MPDs. While the total facility area allocated to neighbourhood level in MPD 1962 was 6.3 ha (approx..), it increased to 7.2 ha in MPD 2001 and then reduced to 5.6 ha in MPD 2021. However, considering the decrease in the population set for neighbourhood level (from 15,000 to 10,000), the facility area per person has increased over time.

The concept of Delhi's neighbourhood planning has evolved significantly through the three Master Plans. While the first Master Plan of 1962 laid the foundation of Delhi's urban planning, it was the Master Plan of

#### Table 1: Structure of Hierarchy

	MPD 1962	MPD 2001	MPD 2021
	PLANNING DIVISIONS (300,000 to 750,000 population)	PLANNING DIVISIONS (10,00,000 population)	ZONAL DIVISIONS (10,00,000 population)
	CENTRAL BUSINESS DISTRICTS AND BUSINESS DISTRICT CENTRES (150,000 to 250,000 population)	DISTRICT CENTRES (500,000 population)	DISTRICT CENTRES (500,000 population)
	COMMUNITY CENTRES (40,000 to 50,000 population)	COMMUNITY CENTRES (100.000 population)	COMMUNITY CENTRES (100,000 population)
100D REA	RESIDENTIAL PLANNING AREAS (12,000 to 15,000 population)	NEIGHBOURHOOD AREA (15,000 population)	NEIGHBOURHOOD AREA (10,000 population)
HBOURH NNING A	RESIDENTIAL UNITS (3500 to 5000 population)	HOUSING AREA (5000 population)	HOUSING AREA (5000 population)
PLA	HOUSING CLUSTERS (750 to 1000 population)	HOUSING CLUSTERS (250 population)	

SOURCE: Compiled by Author (2023)

2001 that introduced the concept of neighbourhood planning. This plan recognized the importance of community participation in shaping the urban landscape, and sought to create more liveable and sustainable neighbourhoods. The Master Plan of 2021 builds upon these ideas and takes them even further, with a greater emphasis on public participation. As quoted by Shakespeare, 'We know what we are, but know not what we may be', the same can be applied to planning. As the city continues to grow and change, it is clear that the planning process will continue to evolve. Similarly, the concept of neighbourhood planning will continue to evolve to adapt to meet the needs of Delhi's residents.

**IN THE DRAFT MASTER PLAN** of Delhi 2041, the hierarchy of facilities at neighbourhood level is now termed as 'Local Level' with further modifications in the facility provisions. Overall, Delhi's neighbourhood level planning has come a long way, and it is encouraging to see the city's planners adopting innovative approaches to create more vibrant and inclusive communities.

### ▼ Table 2: Number of neighbourhood level facilities and their areas

#### SOURCE: Compiled by Author (2023)

S.No.	Use Premises	MPD 1962			MPD 2001			MPD 2021		
		Facilities	Unit Area (Ha)	Nos.	Facilities	Unit Area (Ha)	Nos.	Facilities	Unit Area (Ha)	Nos.
1	Education	Pre-Primary	0.08 to 0.3	10	Pre-Primary	0.08	6	Primary School	0.2 to 0.4	1
		Primary School	0.6 to 0.8	4	Primary School	0.4	3	Sr. Sec School	0.6 to 0.8	1
		Higher Secondary	2 to 4	1	Sr. Sec School	1.6	2	Coaching Centre	0.05	1
2	Shopping	Convenience Shopping	0.2	16 to 18	Convenience Shopping	0.11	3	Convenience Shopping	0.1	2
		Local Shopping (Including Community Hall)	0.7	15 to 20	Local Shopping (Including Service Centre)	0.46	1	Local Shopping	0.3	1
								Service Market	0.2	1
								Informal Bazaar	0.1	1
3	Community Facilities	Community Hall & Library		1	Community Room	0.07	3	Milk Booth	As per standard of the dept.	2
		Religious Building		2	Religious Buildings	0.04	3	Banquet Hall	0.08 to 0.2	1
					Milk Booth	0.015	3	Religious Building	0.04	2
					Community Hall & Library	0.2	1	Anganwari	0.02 to 0.03	2
					Dispensary	0.1	2	Dispensary	0.08 to 0.1	1
4	Recreational	Tot Lot, Playground, Park	0.3	12 to 15	Tot Lot	0.05	60	Tot Lot	0.0125	40
			1	,	Housing Area Park	0.5	3	Housing Area Park	0.5	2
					Housing Area Playground	0.5	3	Housing Area Playground	0.5	2
					Neighbourhood Park	1.5	1	Neighbourhood Park	1	1
					Neighbourhood Play Area	1.5	1	Neighbourhood Play Area	0.5 to 1	1
5	Utilities				Electric Sub Station 11 Kv	0.046	2	Dhalao	0.02	2
								Electric Sub Station 11 Kv	0.008	1
							Underground Water Tank	0.2	1	
								Local Level Wastewater Treatment Facility	As per requirement	1
								Sewage Pumping Station	0.05	1
6	Transportation				Three-Wheeler And Taxi Stand	0.05	1	Three-Wheeler And Taxi Stand	0.04	1
Total			6.3 Ha			7.2 Ha			5.6 Ha	
Facility area per person (sq.km)			<b>4.</b> 2			4.8			%.6	





DEVELOPMENT

## Status of TOD in India

BY PARTH MAKWANA

**INDIA'S** urban population is nearly 377 million, expected to grow to 600 million by 2030. It contributes 65% of the country's GDP, which is expected to rise to 75% in the next 15 years. With the country experiencing rapid economic growth, Indian cities are expanding at a faster rate than other cities around the world.

Land is limited and an essential resource for development, not only in underdeveloped but also in developed nations; optimum utilization is essential. Increased population has led to an expansion of cities horizontally, resulting in longer trip lengths, increased use of private vehicles, pollution issues, and demand for infrastructure.

Achieving sustainable growth and solving issues by coordinating land use planning with transportation system planning utilizes TOD as the most appropriate tool. There are various ways in which literature, think tanks, and different states interpret the meaning of TOD. The idea is not to define TOD, and agree that different states define the terminology according to their planning environment.

**IN THE INDIAN SETTING**, some of our cities already had the characteristics that subsequently connected to TOD. TOD implementation by cities demanded transportation much later, in the early 2000s, when cities began investing in massive investments like metro rail.

With 14 operational metro systems totalling 810km network lengths, seven more systems are under construction with 73.17km of network length. Other seven more systems are sent for approval. This represents a massive investment in this sector, and the central government introduced the National TOD policy in 2017.

The stations along these metro lines are the most important contact points between the systems and the city. How these stations connect and integrate with the city directly impacts system ridership and utilization. However, most of these new systems were designed with less regard for how they interact with the city. **MOREOVER**, little thought is given to how the surrounding areas will be planned and developed to benefit from the massive investments in this world-class infrastructure and vice versa. This intrigues whether this investment in metro systems has influenced the development in cities with metro systems and whether this recent/ existing development change utilizes the TOD opportunity.

If these systems act like a Transit Adjacent Development or Development Oriented Transit and respond to the urban sprawl or are TAD envisioned when investing in large infrastructure projects through the ULBs. The idea is also to provoke whether the densely packed Indian cities are affected by the new transit systems and whether these transits have changed the urban form regarding building footprints, block sizes, etc. To get inferences out of this analysis, an overall scenario of MRTS and their planning in these cities is needed.

To tackle this problem MOHUA introduced National TOD policy in 2017, This focuses on creation of high-density mixed land use development in the influence zone of transit stations, i.e., within the walking distance of (500-800 m) (Figure 1)

**THE IDEA** of this policy is to capitalize on these public investments in transit projects based on certain principles and tools that are recommended. This policy was introduced at the same time as the Metro Rail Policy in 2017. This policy played a major role in encouraging the cities to have city level TOD policy in place to get funds from centre in the MRTS development. Was linking the funding with the policy a good decision?

It is essential to identify at what level of planning the intervention is happening. These levels could be a state-level policy that acts



as a guiding document for the cities, and it is not a statute for the cities to follow. The next level is at development authority/ ULB level policy which is sometimes a statutory document and is an addition to the Development plans. The next level of change is within the development/ master plan, where the change is through introducing a zone or use within the plan. This kind of change is a statutory change and can help cities utilize the potential of TOD. The highest level of change could be brought through introducing LAP-TOD, TPS/ micro level plans, along with a change in the regulations. It is considered better than the TOD opportunity, and will be utilized as the level of change in the lowest order of plans, the micro level plans and the DCR regulations.

Despite the current efforts of many Indian cities to invest in mass transit systems such as BRT and metro rail, few have adopted the concept of TOD. This is despite the presence of enabling factors such as density and diversity of activities, particularly in city cores. Even in cities where TOD has been discussed. progress has been slow. Delhi has made some progress, and its master plan includes an entire section on TOD provisions (UTTIPEC 2012). Ahmedabad has established Transit Oriented Zones (TOZ) as part of its development plan and is currently preparing detailed Local Area Plans (LAP). Bengaluru has prepared and is currently preparing Station Area Plans (SAP). Maharashtra on the other hand is not creating policy at any level rather creating change in regulations through MRTP act.

AS A RESULT, different cities dealt with TOD in their own way, whether through policy intervention at the state or city level, statutory changes in their masterplans or micro level plans, or through regulations. As a result, suggesting a TOD policy in place for funding by the Metro rail policy was unnecessary.

Looking at the statutory and regulatory side of TOD, the reason for patchy implementation is also due to a lack of inclusive planning, norms and zoning regulations, and urban reforms, which can be solved by amending the Town and Country Planning Act of the states, as well as providing a hierarchy of planning and statutory backing to have optimal land utilization.

**FURTHERMORE**, cities with TOD policies that liberalise some regulations such as permissible uses, FSI, and plot level land use to non-permissible uses to allow the market to function and planning can be used for facilitating the market and demand and shifting from a controlled planning approach to a liberal planning approach can not only solve cities utilise the TOD opportunity but also for holistic city development. Imagine if 1 button can illuminate your entire planning career...

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## Outside the box with oneistox

BY PLANNING TIMES TEAM

This is a two-part interview with the co-founder of Oneistox, Harkunwar Singh. Oneistox provides online cohort-based courses for architects, engineers, and designers for their professional growth.

In our second session, we wanted to understand how Oneistox overcame challenges with online learning, and how they progressed towards being the one-stop destination for architecture and design courses.

#### Who are your target audience? What are your approaches to engaging with them?

We breakdown our target audience to primary and secondary target audience. Primary target audiences are those who just completed their studies and are early-career graduates falling in the age bracket of early to mid-20s. They are mostly from AEC industries, which includes architects, civil engineers, electrical and electronic engineers, mechanical engineers, interior designers, etc. The secondary target audience are students who are currently pursuing their studies and about to graduate in the next 1-3 years. Also, there are these group of people who are in their mid-careers who feel they are being left behind in the way industry has evolved and they want to get back to it. So that's how the target audience is broken down for us.

Further to market the same, it is important that it is conveyed differently for different people. For instance, those with architecture background will be very different from civil engineering as each of their thought process is going to be very different. It also depends on the geography. Like someone who is in India will have different expectations from those who is in Middle East. Currently we are focusing mostly in India and a bit in the Middle East. But as we expand and scale, we are strategizing on how to present ourselves in each of the geography along with respect to the target group and the profession they come from.

What architectural practices do you focus on, thereby transforming them to courses? Primary target audiences are those who just completed their studies and are early-career graduates falling in the age bracket of early to mid-20s.

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Firstly, based on our approach, we categorize firms into three types: One, there are these big firms such as MNCs, who have thousands of teams working out of big cities. They have challenges with large scale projects in terms of handling them and collaborating with different types of specialized people working on a project. So the product we offer are mostly for people working in these big corporates. Secondly, there are these firms who are recently big, with team sizes of 100 to 150 people. They also do decently good-sized project but are more focused on design and they do not want to do standardized way of doing things. Thirdly, there are the studio firms with 20 to 30 people strength. But the number of such firms are very high. Our courses are therefore categorized in such a manner such that each course has a specialization. For example, we have a course on computational design. If you go further and deeper into specializations, you understand where does computational design and BIM coincide. Then there is a specialization around sustainability like high performance building design. So we try to figure out where the need is and it varies with respect to the demand of people who are in them. We haven't narrowed the niche for ourselves but our products that we offer makes a lot more sense to big companies who look forward to hiring graduates of Oneistox in 100s. For instance, there are these firms who will be hiring 100 to 150 BIM graduates in the next six months, then there are a couple of firms who will be hiring 30 to 40 BIM graduates each in the next six months or one year. That's how the ecosystem comes together for us.

## How was the first course of Oneistox?

We had this very small cohort of around 30 people - 22 from India and 8 were International students. They were all really interesting people. A couple of them were civil engineers, and most of them architects. We saw a commonality right in them – they were really fed up of what they were doing and wanted to move out of the profession. However, their heart wanted to be in this profession as they spent five years studying architecture and a couple more practicing, but they sort of felt hopeless in the space. Then they saw this course and felt this as a promising space to be in. They therefore enrolled and became a part of it. Majority of them got jobs and 90% of them were placed post-course. And they all got like an average salary hike of 120 to 140%. Actually one or two of them even got a salary hike of 300 to 350%. That's where a lifechanging event happened for these individuals in a certain way. They had this career trajectory which was

so slow, suddenly they were put on a different tangent and they had an absolute growth in their career. So that was that.

I am no expert in this space, but I have an understanding of the industry. So the intent was to bring it all together because we understand where the void is and how do we fill the void. So we had these six mentors from various big firms across different countries like US, UK, Portugal, etc. They came together to build the course along with the in-house mentors that we had. That's how the course came together. Post that, we did revision to the course and tried to make it better each time with the feedback that we received, including the content, quality, engagement, live sessions and how more features can be enhance.

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We saw a commonality... they (students) were really fed up of what they were doing and wanted to move out of the profession. However, their heart wanted to be in this profession as they spent five years studying architecture and a couple more practicing, but they sort of felt hopeless in the space.





## What are the courses that Oneistox offers?

Before we jump to the courses, I would like tell you that courses must lead to some sort of outcome. However, the core problem is awareness, as most people don't know what is happening in the industry. So we wanted to solve the issue of 'awareness'. Hence, one of the key offering that we provide on the platform is that people can come and learn about the various fields that are growing in the construction industry such as BIM, computational design, construction management, etc. along with their individual career prospects. That awareness doesn't exist. So we wanted to solve for awareness first in the platform which is free - people can consume content and learn about it. We are also creating this new product which we are launching next month where one can get awareness and a career direction. Every individual is different: there will be someone who would be highly analytical, and someone who would be highly creative. So it governs depending upon an individual capabilities and provide them an idea of which career path would be best suited to them. That awareness and direction for the career is the first part that's missing. When people get the clarity on their career, they can choose the course they want to pursue. That's what we are addressing first.

Second, in terms of upscaling opportunities with the two product of courses we have: BIM professional course, where people come and learn from the scratch. By the end of 6 months, they are able to bag the job of a BIM specialist in any of the big architecture studios or construction firms. And second is the computational design. We have the first set of people coming together for the first cohort and the intent is as soon as people complete the course, they will be ready to get a job at any of the top design firms in the world, including product design firms or even automobile design firms. So that's what we are trying to work towards.

## What are some future milestones of Oneistox?

We really want a focus-oriented work. We see a lot of companies who produce so many courses that we believe it takes away from quality work. So what we want to do is a lot of research and have really good clarity on what we should work towards. That's how we define our scope and limit to maybe 5 or 6 products of courses that we need to work towards. We make them the best possible products out there in the market and bring all things come together such as great learning as well as great mentorship experience for the people who are teaching. It also becomes a very high quality experience for people who are hiring and they get value out of the learners who are graduating from the course. We also want to make the experience for someone who is learning really engaging through gamification of the platform. How do we do that becomes one of the key milestones!

We will be launching two more courses in 2023. We will therefore be limiting ourselves to just 4 courses in the entire year and progressing steps in the next one and half year. While we do that, the product features we are working towards are: first, we will be releasing the product after a couple of pilots in the near future where organizations can upskill their entire team as it is cheaper and more convenient to upskill your entire organization than to get people from outside. The other part is we are exploring more localized languages because currently the entire product works on English. How to make the product work in Indian context such as Hindi along with other regional languages and also explore international languages such as

#### The team at Oneistox 💧



Further, the problem we are addressing of upscaling and techfirst education in the AEC industry is very limited in the entire world. If I especially talk about developing countries such as India, Africa, Latin America and some parts of South East Asia, construction contributes to about 15 to 20% of the GDP of the country every year. And not much has been done to facilitate upskilling an education in that entire space. Recently, we just had a partnership with the National Skill Development Corporation (NSDC) as their official partner to upstream people in the construction industry. We have a vision of even getting into upskilling state and national governments as well. There are DDA, NDMC and many government entities that have architects and all other people who actually govern how things should be done. But they need to be upskilled in a lot of these technologies. So that's the plan for us.



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We really want a focusoriented work. We see a lot of companies who produce so many courses that we believe it takes away from quality work. POST GRADUATE EDUCATION

# PLANNING OVERSEAS

## Your guide to Masters programmes outside India

BY GAIBUL SINGH BHULLAR

Planning Overseas is focused on generating awareness of Masters courses offered by countries outside India for urban planning and allied fields. The information that you see here has been collected from official university websites, and the calculations are based on approximations and rounding-off of values sourced from the respective college/university websites. We hope this brings clarity to your choice of opting for planning and allied courses outside India.



## Harvard University

#### Location: Cambridge, Massachusetts Course: Masters in Urban Planning (MUP) Duration: 2 years Total expense\*: ₹ 1.5 crores

Accredited by the Planning Accreditation Board and open to students with an undergraduate degree, the two-year professional Master in Urban Planning (MUP) degree program engages with critical issues facing cities and regions in coming decades.

\*Tuition and application fees + Average living expense + Average travel cost



## **″u**Delft

## **Delft University of Technology**

Location: Delft, Netherlands Course: Masters in Urbanism Duration: 2 years Total expense\*: ₹ 60 lakhs

Students learn to integrate social, cultural, economic and political perspectives with the natural and man-made conditions of the site in order to shape and plan for more sustainable development.







## **UC Berkeley**

Location: Berkeley, California Course: Master of City Planning (M.C.P.) Duration: 2 years Total expense\*: ₹ 80 lakhs

The two-year Master of City Planning (M.C.P.) program comprises a solid core of knowledge in the field of city and regional planning, including history and theory, planning skills and methods, planning law, and urban economics.

## ETH zürich

## **ETH Zurich**

Location: Zürich, Switzerland Course: Master of Advanced Studies (MAS) in Urban and Territorial Design Duration: 1 year Total expense\*: ₹ 40 lakhs

The new joint Master of Advanced Studies(MAS) in Urban and Territorial Design at the ETH Zürich and EPFL aims to build an innovative urban and territorial design education addressing social and environmental challenges across wider landscapes.

\*Tuition and application fees + Average living expense + Average travel cost





CLIMATE CHANGE

## Innovation takes centerstage

Harnessing the potential of climate finance



**Hitesh Vaidya** Director, National Institute of Urban Affairs, New Delhi



Nabamalika Joardar Head, Innovation Unit of National Institute of Urban Affairs, New Delhi

#### (Reposted from ET Government)

Climate fintechs are helping bridge the innovation-funding gap, choosing to invest in applications and platforms that may not initially seem commercially viable but are expected to show impact eventually. **INDIA**, as the third-largest greenhouse gas emitter in the world, faces a significant challenge in addressing its impact on the environment. The majority of India's emissions come from the energy sector, particularly coal-fired power plants, with significant contributions from the transportation and industrial sectors as well.

However. India is taking proactive steps to transition to a cleaner energy mix and has set a target of procuring 40 percent of its installed power capacity from renewable sources by 2030. As per the Climate Change Performance Index (CCPI) released in November 2022, India ranked amongst the top five countries in the world, and the best among the G20 countries based on its climate change performance. The role that climate finance will play in India's climate change management goals, therefore, cannot be underlined enough.

#### CLIMATE FINANCE

At present, India relies on climate finance through government funding initiatives such as the National Adaptation Fund on Climate Change and the National Clean Energy Fund; international aid for climate-related projects through organizations such as the World Bank, the Global Environment Facility, and the Green Climate Fund; and multilateral initiatives such as the International Solar Alliance and the International Renewable Energy Agency.

Climate finance investment in India flows through equity funding. The state of Climate Finance in India 2022 report states that 62 percent of climate investment occurs through tech-focused venture capital firms and impact funds, while only nine percent of climate tech investors provide dedicated climate-focused funds. Green bonds are another financing avenue that provides clean-tech firms with an accessible, affordable option to raise capital.

#### **INNOVATION IS CRUCIAL**

Innovation is a crucial avenue that requires exploration in order to catalyze change, specifically to chart a transition to a low-carbon future that is responsive to the Indian market, spatial sensitivities, and domestic consumer affordability.

At the macro level, cities continue to face considerable challenges in their attempts to operationalize innovative climate investment models.

They face limitations in terms of revenue instruments and harbor a strong dependency on fiscal transfers from state and national governments to implement new initiatives. The case of Surat's efforts to finance climate adaptation as part of its urban development is worth noting. The Surat Climate Change Trust was established in June 2012 in an attempt to institutionalize the adaptation agenda. The Trust raised funds from the Surat Municipal Corporation and through international organizations. By functioning as a private entity, the Trust was able to bypass funding restrictions to solicit support from external sources, was immune to bureaucratic and political influence, and as a legal entity, the original objectives of the Trust could not be changed or redirected.

Additionally, in 2013, the Surat Municipal Corporation introduced a newline item in its municipal budget, funding climate-related studies and capital investments. Surat's case indicates that in order to fund climate adaptation action, cities will have to create contextual models to respond to constraints created by local governance structures.

The Government of India is taking several steps to support innovation in climate finance for startups in India. Startups can benefit from tax incentives for investing in renewable energy and energy-efficient technologies and can access seed funding for earlystage companies through initiatives such as the India Innovation Fund.

#### INDIA RENEWABLE IDEA EXCHANGE

In one instance, the Ministry of New and Renewable Energy (MNRE) has developed the India Renewable Idea Exchange to swap ideas in real time for the global renewable energy community. Similarly, MNRE's I-Cube is a multi-stakeholder collaborative engagement platform to catalyze ideas on renewable energy that encourage innovation and enable incubation.

Despite these efforts, startups that work on climate change avenues face multiple barriers when attempting to access finance. For starters, a lack of awareness and understanding of climate-related technologies and solutions among investors results in climate-based startups not finding favour to the extent that digital and fintech startups do, leading to a paucity of funding for scaling up of ideas from inception to market-readiness.



well-Competition with established firms in the traditional energy sector, coupled with a high level of risk associated with early-stage investments in climate technology startups results in view climate-based the that startups may possess difficulty in demonstrating financial viability. Moreover, international funding agencies choose to fund only established initiatives. Most importantly, startup finance is

aggregated primarily around Delhi-NCR, Mumbai, and Bengaluru.

Climate fintechs are helping bridge the innovation-funding gap, choosing to invest in applications and platforms that may not initially seem commercially viable but are expected to show impact eventually. Startups are beginning to explore alternative avenues of financing, such as crowdfunding, impact investing, and revenue-based financing.



#### BLOCKCHAIN TECHNOLOGY IN ENERGY

Take the case of a Norwegian startup named 'Empower', which uses blockchain technology to create a decentralized energy marketplace where individuals and businesses can buy and sell excess renewable energy. The transactions are recorded on a blockchain ledger, providing a transparent and secure record of energy generation, consumption, and trade. Through blockchain financing, Empower is able to raise funds by issuing tokens that represent ownership in the company and its energy network. Investors can purchase these tokens and receive a share of the revenue generated by the sale of excess renewable energy on the platform. Innovative mechanisms such as these are ideal for replication by Indian startups. It goes without saying that finance forms the crux of the climate mitigation and adaptation measures that will help India realize its medium and long-term sustainability goals. To this end, establishing innovative measures of unlocking large-scale financing can be expected to assume a significant role, along with a generous push from the government, and private and public enterprises.

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A tributary of the Periyar River flows through a rapidly urbanising town in Udumbanchola, Kerala. Rivers serve as ecological corridors in fragmented landscapes, connecting isolated urban and rural wildlife populations.

**©Ann Rochyne Thomas** 

## Accounting for biodiversity in spatial planning

BY ANN ROCHYNE THOMAS

Nature conservation cannot be separated from development because the global economy is dependent on the goods and services provided by nature. One of the primary causes of species extinction is habitat loss. As pristine lands become more urbanised, urbanadaptive species thrive while urban sensitive species decline.

**ACCOUNTING**, that is, disclosing, measuring, and reporting for biodiversity, has the potential to partially reveal what was previously hidden in conventional accounting. By influencing how people perceive their contribution to biodiversity loss, this visibility can change attitudes and behaviour, and foster a more informed society.

Biodiversity accounting is the practice of publicly disclosing an organization's or region's biodiversity impacts and conservation efforts. Accounting for biodiversity is becoming increasingly important across industries, particularly those with a substantial impact on natural habitats.

Planners, developers, and homeowners can more effectively identify synergies and minimize trade-offs between conservation and development objectives by considering the impact of a development on the biodiversity of a habitat.

**THE CONCEPT** of mitigation hierarchy, the cornerstone of ecological best practise, needs to be communicated to stakeholders. 66

Biodiversity accounting is the practice of publicly disclosing an organization's or region's biodiversity impacts and conservation efforts.





Kadamakkudy, a group of 14 islets in Greater Kochi, awakens long before daybreak. The majority of the people engage in rotational fish-shrimp, and paddy cultivation. These villages are rich in biodiversity, with over 214 species of birds alone. Located only around 10 kilometres from Kochi's central business district, Kadamakkudy is now under increasing pressure from both urbanisation and ecotourism.

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The concept of mitigation hierarchy, the cornerstone of ecological best practise, needs to be communicated to stakeholders.

The hierarchy of mitigation greater emphasis places on preserving existing habitats than creating new ones. It recognises the risks associated with establishing new habitats, which are absent when existing ecosystems are preserved. The mitigation hierarchy is intended to address impacts on biodiversity by first attempting to avoid impacts whenever possible, then minimising impacts, and finally offsetting any unavoidable impacts.

Various approaches are currently being used for recording, valuing, and communicating biodiversity metrics. The acreage and habitat types are first established before undertaking a natural capital inventory. This is followed by valuation of the non-critical habitats at either a market or amenity value. The number of various species do not always accurately reflect the ecological value of an ecosystem. If a habitat is abundant in invasive species, it will be biodiverse but have little ecological value. This necessitates the ecological grading of habitats.

**CHANGES** in biodiversity may be quantified using a six-level hierarchical criticality pyramid. The categorization at level 1 is based on the type of habitat and the status of natural capital as recognized by government authorities. Rare and endangered species are included in level 2 inventories. Inventories of critical habitats are conducted at levels 3 and 4, and inventories of all habitats are conducted at levels 5 and 6, first by species and then by population, for each of the four levels. To track long-term habitat changes, it is preferable to record this data annually.

The relative biodiversity potential of an ecosystem may be assessed and scored in order to determine biodiversity units' for a particular habitat. By evaluating several habitat intervention strategies, biodiversity accounting may be used to estimate the potential environmental viability of establishing new habitats or enhancing existing ones. The preintervention or baseline biodiversity unit value of a habitat is estimated by multiplying the different measures of habitat quality: the habitat's size, degree of distinctiveness, ecological condition, and strategic significance of location in relation to regional ecosystem services. The postintervention units can be estimated in the same manner but with the inclusion of temporal and spatial risks, as well as other risk factors, of retained, enhanced, or created habitats.

This Parambu located in Kottayam, Kerala is a traditional silvopastoral (pastoral agroforestry) homestead based on the integration of family-based agricultural and pastoral activities within a cohesive neighbourhood network.



**THE CHANGE** in terrestrial and aquatic biodiversity driven by an intervention can be calculated by deducting the pre-intervention or baseline biodiversity units from the post-intervention units. This is combined with any off-site gains to provide a final biodiversity unit value, which indicates the overall net gain or loss for the intervention. The development proposal can then be upgraded to increase the number of biodiversity units. Because it only considers direct impacts on habitats, achieving biodiversity gains may not result in an intervention that meets the broader objectives of regional environmental regulations. Furthermore, employing habitats as a proxy for biodiversity is a gross simplification of ecological processes. A biodiversity unit score is not an absolute metric, but rather a proxy for a habitat's relative biodiversity value.

Objectives for biodiversity conservation must be defined in connection to existing and desired ecological patterns. Private gardens, homesteads, and parks that provide habitat heterogeneity at the local scale, may not provide the connected habitats that mobile species require. Biodiversity integration in spatial planning is hampered by institutional and regulatory constraints, a lack of clear assessment targets for urban biodiversity, and socioeconomic issues. In India, there is a scarcity of city-wide, systematically collected biodiversity data, and what is available is frequently dispersed across multiple sources, and incompatible. Furthermore, government administrations are not always transparent. Urban biodiversity assessments may benefit from the addition of species occurrence data from citizen science activities.

The skills and knowledge of local actors are crucial to the accomplishment of biodiversity



The majority of urban green spaces in Kerala's cities are either private gardens or significantly scaled-down versions of the state's traditional Parambu (silvopastural homesteads), as in this neighbourhood in downtown Kochi.

management initiatives because ownership is property shared at the neighbourhood level by a diversity of stakeholders, including home owners, small businesses, institutions, and the government. Identifying mutually beneficial techniques for increasing biodiversity at the landscape level may be tricky for multiple stakeholders.

Therefore, for integrated biodiversity planning, it is necessary to investigate the ecological, economic and socio-political contexts.

Contrary to the biodiversity offsetting strategy, which reduces the opportunity for urban residents to engage with nature, and increases the risk of overall biodiversity loss, biodiversity-sensitive urban design aims for on-site biodiversity benefits.

AS LAND-USE CHANGES are a driver of declining biodiversity, incorporating biodiversity accounting into spatial planning is crucial for sustainable urban futures. A coalition of stakeholders, including local organisations, government agencies, and resident welfare associations, is required to preserve, restore, and enhance biodiversity. Participatory bottom-up biodiversity conservation approaches can help push local governments to incorporate biodiversity accounting and conservation strategies into spatial planning to address urgent ecological issues in an increasingly urban world.





GOVERNANCE



Observing planning through the governance lens can answer if planning belongs to the state or the centre.

BY ISHITA SARASWAT

**IN RECENT YEARS**, the union government has shifted its approach from central schemes to centrally sponsored schemes. A central scheme is where the central government funds the schemes and the respective state governments are given the responsibility of implementation while a centrally sponsored scheme is where the funding is shared between the central and state government. This approach in one perspective increases the accountability among states on the funds spent thus increasing efficiency. Further it enables the central government to bring in schemes pertaining to the state subjects by helping the states with the funding. As much as it sounds effective, it is also an issue for the urban planning sector. The implementation of urban planning schemes and projects depends heavily on all the three levels of government. Who will do what? Who spends? Who manages? Who coordinates? Who monitors?

Since day one of planning school, we all were made to memorize that 'land is a state subject in India'. As true as it sounds, its only the tip of the iceberg. Article 246 of the Indian Constitution mandates the division of powers over subjects among the state and the union. Accordingly, the 7th schedule details it out- a union list with 97 items, a state list with 66 entries and a concurrent list that enables both state and union government to enact laws on with 47 entries.

The understanding of "Land" as a state subject comes from the state list entry number 18 and 45. Entry 18 deals with land tenures, collection of rents, land improvement and colonization while entry 45 includes land revenue, maintenance of land records and surveys therewith. These two entries have shaped the majoritarian understanding that 'land is a state subject' whereas this does not coincide with the multi-sectoral aspect of planning profession. If one clearly goes through all the entries in all the three lists, there are several entries that come under the ambit of planningfor example forests, protection of wild animals and birds is under concurrent list, cantonment areas governance, railways is under state list.

**URBAN PLANNING** as a word was never mentioned in the constitution until the 73rd and 74th amendment. Until then, it was always an extended understanding rooted in the entry 18 and 45 of the state list. While the multi-sectoral dependence was not understood in full capacity, these amendments introduced



another tier- the local government into the pool. Furthermore, within the state governments, planning is either scattered over several departments and lacks uniformity across states. Clearly, there are several stakeholders are required to be involved for any urban planning schemes at all three levels- central, state, and local government. This is certainly not possible without developing a strong urban planning ecosystem wit adequate planning capacities at all levels- especially local level.

The worsening state of municipal finances is not hidden. As the definition of urban planning has broadened so has the responsibilities for the municipal bodies. Municipal bodies' own revenue streams may be divided into two categories: (i) own tax revenue sources like property taxes, water taxes, and toll taxes, and (ii) non-tax revenue sources such user fees and other charges, investment income, and rental income from municipal facilities. The main source of personal taxation is the property tax particularly with the introduction of the GST. This is because previous sources of income from own taxes, including the octroi and the entertainment tax, were absorbed by the GST. The collection of property tax in India is already lower than developed countries.

As per the report of State finances, published by PRS Legislative research, the share of transfers from central and state governments to municipal bodies has increased in the overall revenue. RBI in its 2022 report also has noted that municipal bodies are constrained in terms of resources for incurring expenditure.



**MOREOVER**, their ability to finances through market borrowings is also limited by the states. In 2019-20, transfers are estimated to account for 36% of revenue receipts of municipal corporations. The Honorable President in her address to the joint sitting of the parliament this year referred to the SMART City and rural drone mapping initiatives taken by the government. These schemes are incomplete without the concerned experts carrying it forward. All the centrally sponsored schemes for urban rejuvenation promoted in recent years overlook the core of Town and Country Planning, which is the foundation for the integrated development of cities, citizens, and the environment, has not received adequate attention.

THE NITI AAYOG report on Reforms in Urban Capacity in India also highlights this grave issue of market disconnect of town planners with the supply. Even the government department lack in hiring of qualified town planners in their departments- let alone realizing the need of involvement of planners outside the town and country planning departments. Looking forward to human resources capacity, the current government machinery at all levels is not equipped well. The parliamentary committee on Housing and Urban Affairs in last two decades has never undertaken a study on planning capacity and resources assessment despite the Union government several introducing schemes under the ambit of sustainable development, redevelopment, and rejuvenation.

**DESPITE** the push towards urban and rural development, the intended outcomes are delayed and few of the reasons for these are the ones we went through. When the local governments do not have effective finance management and the government does not have qualified professional planners to do so, no scheme or grants provided thereunder will bring in the required results. It is time that we start looking at Urban Planning from a legal lens and understand the complexity of the issue in Indian governance structure. Only then we would be better equipped to bring in schemes that work in the urban sector.

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### IMAGERY

## Satellite Watch

It is interesting to see how basic elements like buildings, public spaces, streets, and natural features interact to give different urban forms. Let's appreciate our beautiful cities for what they are through the lens of a satellite.

Google Earth Image © 2023 Maxar Technologies



Bangalore, 2023



![](_page_48_Picture_0.jpeg)

![](_page_49_Picture_0.jpeg)

![](_page_50_Picture_0.jpeg)

![](_page_51_Picture_0.jpeg)

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![](_page_53_Picture_0.jpeg)

I WOULD BE NAÏVE if I said modern Indian planning is unique and amazing. Notice how I specifically mention 'modern'? I say so because I only vaguely remember the one single 'history' of Indian Planning class which quickly went over the Harappan, Vedic and Mughal forms of city planning when I was new to Planning. Otherwise, I could quickly list all rungs of Arnstein's ladder of citizen participation without a single error.

To go slightly backwards in postindependence Urban Planning in India, the liberalization of Indian planning started well before India's economic liberalization. Chandigarh – the example we love, was designed by Le Corbusier, a Swiss-French architect whom we love, and obviously, Gandhinagar too, was built by his apprentice Mewada from Cornell.

The baseline is that we appreciate everything that comes to us from across the seven seas, while what is our own is lost in translation – which ironically applies also to Indian Planning and its education. The culprit I feel, however, is the Delhi Master Plan of 1961, which was fully articulated in an Independent India and set precedent for other brownfield cities all across the nation.

What we simply did was we looked around, thought that this chaos needs to be managed, and recreated what other nations were doing for their cities at that time. Great – we obviously needed roads for the elites who had motorcycles and tot-lots for their children to play. An arbitrary number and quantity were fixed, and land use was determined, limited, and restricted. World-class cities were made, to show outsiders instead of helping those of our own kind. Not that that is wrong, but that was what lighted the larger fire.

IN AN IDEAL WORLD, in an Indo-centric Delhi, how would that master plan be? And what I mean by Indo-centric is simply devoid of colonial influence, and righting the wrongs of the pre-colonial past (or decolonial, as is in vogue these days). Could it have promoted more organic development instead of deliberate suburbanization? Could it have been more of a planner's plan than a manager's plan?

The reason I say so

is because the only thing that needs to be planned and managed is chaos - and surprisingly, that is what the British thought India was. The motive of Lord Macaulay was to make Indian people English in taste and opinion despite the obvious difference in colour and blood (Vijayalakshmi and Sarat Babu, 2014). And yes, we decided to call ourselves chaos, and then make decisions to manage that chaos. Surprisingly, our old cities also stood the test of time, despite the same 'chaos'; and also probably because of the one good thing the ASI did, which for extra information, is a separate entity from the underfunded architectural conservation department (if it exists).

**WHY** I give this background is because this systemic process continues, to this date, in how we plan (or design) our cities and how we make our plans. Of course, the plans are in English, with a rare google-translation to a local tongue (which has terminology in regional languages that even the language experts will take a second to understand). Why any third world country is the baseline marker anymore to determine how we perceive our success is a question for another day.

The point is, when will we appreciate ourselves? For how long will we continue building glass façade buildings that will shatter with a single minor quake? **HOW LONG** will we continue to ignore the vibrant past that did shape our habits but not our thoughts? How long will we continue to use the poor to be drivers, electricians, delivery men and vendors; have the audacity to bargain (more like haggle) with them, and then spend royally at a chain restaurant? There will reach a point when we will not be able to manage to have the best of both worlds if we continue at this pace.

Are we still enamored by the greener grass on that other side, is the question we should ask ourselves. Are we still stuck with the 'Garbagein, Garbage-out' paradox? We have elaborate plans, systems, and minds that are set in place to manage the situation. Great rails, metros, infrastructure. highways, and Definitely needed for the nation, economy, and people at this point. And yet, do we adequately consider for whom and why we are doing what we are? Sure, we talk about equity, inclusion, participation and diversity and so on and so forth in the plan objectives, and then end up planning a grid pattern with the same old skyline. No more will one be able to differentiate between Gurugram, NOIDA, Secunderabad, Pimpri-Chinchwad and Whitefield, and more that will come along that line. The same mistake that the 1961 plan did with its identical planned colonies, though at a smaller scale.

**GONE ARE THE TIMES** when the planner had to be unbiased – a planner rather, should be biased in the right way to provide for the everyday citizen, and that starts right from the basics. The structure of the plan, the language, the components, the ideological basis, the emphasis, and the perception of the plan. Obviously, take the best of what others have to offer – great policy initiatives are available across the

![](_page_55_Picture_3.jpeg)

globe, but applying it with a pinch of salt and a huge amount of tailoring is what is important. It is not always about bottom-up versus top-down, but about the convergence of the two. It is about how you make a decision as a planner, converging the different perspectives, knowledge, issues, goals, interests and ideas into one comprehensive, well-researched decision. Not as an architect, not as an engineer, not as a manager, not as a politician, not as a corporation, but as an Indian Planner, emphasizing both: being an 'Indian' and a 'Planner', either of which will always be central to one's identity and practice.

Obviously, take the best of what others have to offer – great policy initiatives are available across the globe, but applying it with a pinch of salt and a huge amount of tailoring is what is important.

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![](_page_56_Picture_1.jpeg)

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#### Puzzle Catalogue #5 April 2023

![](_page_57_Picture_1.jpeg)

![](_page_57_Figure_2.jpeg)

🕞 Metro Hashi

#### Create one single metro line through all stations.

The goal is to connect all of the metro stations into a single connected group by drawing a series of lines between the stations.

#### The lines must follow certain criteria:

- They must begin and end at distinct stations, travelling a straight line in between.
- They must not cross any other lines or stations.
- They may only run orthogonally.
- At most two lines can connect a pair of stations.
- The number of lines connected to each station must match the number on that station.

![](_page_57_Picture_12.jpeg)

![](_page_57_Figure_13.jpeg)

You think you can hack your brain?

Difficulty

![](_page_57_Picture_14.jpeg)

### The objective is to place skyscrapers in all cells on the grid according to the rules:

- The height of the skyscrapers is from 1 to the size of the grid i.e. 1 to 4 for a 4x4 puzzle.
- You cannot have two skyscrapers with the same height on the same row or column.
- The numbers on the sides of the grid indicate how many skyscrapers would you see if you look in the direction of the arrow.
- Write numbers in each cell to indicate the height of the skyscrapers.

![](_page_57_Picture_20.jpeg)

Think again!

![](_page_58_Picture_1.jpeg)

![](_page_58_Picture_2.jpeg)

Difficulty

Scan this QR code to find solutions to all the puzzles below

![](_page_58_Figure_5.jpeg)

![](_page_58_Picture_6.jpeg)

![](_page_58_Picture_7.jpeg)

#### Find the words in the puzzle.

Words can go in any direction. Words can share letters as they cross over each other.

Centerstage Centrality Coalition Fish Shrimp Innovation Legal Multisectoral Nourishment Orphan Parliamentary

Pastoral Renewable Ridership Rio de Janerio TOD

![](_page_58_Picture_13.jpeg)

![](_page_58_Picture_14.jpeg)

## Loop the Landuse 🔊

#### Make a single loop around the landuse colours.

Make one single loop around all the landuse colours. There are no crossings or loose ends. There is only one line which is continuous.

![](_page_58_Figure_18.jpeg)

Each landuse colour indicates exactly how many lines should be drawn around it. Cells which do not have any colour inside can be surrounded by any number of lines.

> Here's a key for the landuse colours Industrial - surrounded by 3 Commercial - surrounded by 2 Residential - surrounded by 1 Recreational - surrounded by 0

![](_page_58_Picture_21.jpeg)

Srinagar during 2014 floods SOURCE: Dar Yasin/Associated Press, TheNew York Times

DISASTER MANAGEMENT

## Navigating the

A case study of Urban Flooding in Srinagar By THOMAS KRISHNA PEGU **THE MAGNITUDE** of recurring natural disasters is escalating to unprecedented proportions as the twenty-first century progresses. In 2018, 315 natural catastrophe incidents were registered throughout the world, affecting around 68 million people and costing the global economy \$131.7 billion. Asia bears the brunt of the damage throughout the continent. It alone accounted for around 45% of worldwide natural catastrophe occurrences, 80% of deaths, and 76% of disaster-affected persons.

FLOODS account for about 40% of all known catastrophe occurrences and so have the biggest impact of the 315 natural disaster events. Flooding has been a recurring issue in India's Kashmir valley. The Kashmir floods of 2014 were one of the valley's worst hydrological disasters. The valley had one of its greatest floods in 60 years during the initial week of September 2014. Unprecedented rainfall fell for around 4-5 days, significantly contributing to increased run-off from River Jhelum tributaries. According to reports, the flood killed over 287 people, impacted roughly two million people, and destroyed around 2.54 lakh dwellings in the state. It caused huge damage to property assets, economy, ecology and both social and physical infrastructure. Overall, 5.5 Lakhs population were displaced and over 6.51 lakh hectares of cropped areas were affected.

The major causes of these tragic catastrophes were rising global temperatures, population increase, wetlands loss, deforestation, and unregulated land-use changes. encroachment The of river water channels and siltation in water bodies caused by erosion have exacerbated the valley's vulnerability to flood hazards. Although unprecedented rainfall was the immediate cause of floods in the Kashmir valley, the disaster was

exacerbated by a number of factors, including rapid urbanisation in the valley, encroachment of buildings on land adjacent to river banks, and the disappearance of wetlands, which blocked natural drainage patterns, exacerbating the situation.

**SRINAGAR** is the first metropolis and a fastest growing city in the Kashmir Valley. The city has one of the diverse and unique physiographic setups, surrounded by mountains in the eastern and north-eastern side and flood plans in the western side. The settlement patterns and the housing morphology of the city has been shaped by the river Jhelum, hence linear and ribbon development can be observed along the river valley.

![](_page_60_Picture_5.jpeg)

Due to the close vicinity of the river, frequent floods are common in the city but the hill slope protects the city from these perennial phenomena. About 44.4% of the waterbodies and wetlands were lost in the suburbs of Srinagar city during the last century, which has affected the micro-climate of the city along with exposing it to an increased flood threat. The wetland and waterbodies have receded consistently and undergone tremendous land use change owing to siltation coupled with floods and human interference. It has reduced from 356.85 sq.km in 1911 to 158.54 sq.km in 2011. The built-up area within Srinagar city limits during the last three decades has grown by about 29.20% in 30 years (1971 to 2001), which is nearly three times the rate of population growth. Mainly due to the depletion and degradation of these wetlands, rapid urbanization and encroachments has an adverse impact on the efficacy of the wetlands to retain floodwaters during peak discharge and flash floods, thus endangering the lives and property of the Srinagar city and suburban areas.

Flood control measures have been practiced in the valley since ancient times. In the 9th century under the rule of Avanti Varman, the area would flood up to Bijbehara frequently. During his regime, it is known that a large chunk of wetlands were converted to paddy fields. During 15th century, Sultan Zainul Aabideen Budshah constructed the Mar Cannel, joining Bari Nambal to the river Jhelum. Interior channels were constructed in the 19th century near Noorbagh mainly to divert the excess water discharge from the river Jhelum. Following the flood of 1893, the early 20th century (around 1903), witnessed a first major flood control, which was the construction of flood spill channel (FSC), constructed by Maharaja Pratap Singh. The FSC diverted the excess floodwater discharge from the river to the low-lying wetlands of Batamaloo and Hokarsar.

**IN 1953,** the Central Water & Power Commission (now Central Water Commission) recommend enlargement and excavation of the existing FSC from Padshahi Bagh to Wular Lake. They also proposed diversion of the Ningli Nallah into the Haigum Jheel. Subsequently in 1958, the Master Plan for Flood Control and Drainage in the Kashmir Valley recommended that the two low-lying areas be used as detention basins to increase the capacity of the FSC for diversion and widening the river Jhelum. Over the years, disaster management systems that has incorporated flood measures, have been developed at various

administrative levels. Following the flood of 2014, various initiatives have been taken to extend the flood spilling channels, in the form of schemes and DPRs.

Despite the development of management disaster systems, their functionality and efficacy in terms of preparedness, mitigation, and response planning caused irreversible physical and economic damages to the community. Despite multiple flood occurrences, installing flood forecasting and early warning systems at appropriate sites and regularly monitoring them has proved difficult. Prior to the storm, hydrological monitors observed an increase in water levels in September 2014. Local officials, however, ignored the signs of an alarming rise in water level because these stations were only designed to monitor the flow of water from India to Pakistan. Had the information by these stations provided flood forecast to the state authorities, it would have prepared for flood recovery by providing an early window to evacuate people from low lying areas, deployment of special teams and arrangement of relief supplies. The situation could have been controlled through having proper communication network and last mile connectivity.

SRINAGAR Development Authority (SDA) began work on the Second Master Plan for the year 2021 in the year 2000, using satellite data. The suggestions were rendered inefficient due to the agencies' sluggish implementation. This resulted in terrible living conditions and made it difficult for city planners to provide a fair quality of life and environment to residents. Notwithstanding the physiographic constraints. growing population has resulted in uncontrolled city expansion, resulting in haphazard construction neighbourhoods, of residential

congestion, irregular narrow alleys, drainage difficulties, and streets strewn with filth and grime.

Despite the fact that the region had observed multiple flash floods and two severe floods in the past (during 1959 and 1992), the State was not been identified as flood prone. The State Disaster Management Authority (SDMA) and District Disaster Management Authority (DDMAs), which were responsible for disaster management in the state, were yet to prepare disaster management and response plans. Though the government approved Disaster Management Policy in 2012, the institutional system and allocation of responsibilities to the departments during natural is disasters still underway. The untimely and inequitable distribution of assistance is a major issue. Only after the 2014 flood, the Central Water Commission (CWC) planned to install flood forecasting system and monitoring mechanism.

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Despite the development of disaster management systems, their functionality and efficacy in terms of preparedness, mitigation, and response planning caused irreversible physical and economic damages to the community.

**FLOOD PREVENTION** and mitigation measures are generally used by the regions where floods are a recurrent phenomenon. People living in such areas are habitual of taking certain precautions such as shifting from low-lying areas, creation of embankments, construction of dams and reservoirs, channel improvement, desilting of rivers, land-use planning and diversion of flood waters in order to reduce the damage. Such measures were not adequately implemented by the communities and officials, which resulted in acute destruction. The response operation of the authorities several exposed shortcomings related to immediate response, distribution of relief supplies, rescue, damage assessment, restoration and rehabilitation, which affected the entire rehabilitation process. A lot of vital time was lost in developing repair and reconstruction mechanism within government and resource management. If the postdisaster recovery mechanism is identified, the process of response, resettlement and rehabilitation could start timely, better coordinated and planned.

IT IS IMPERATIVE that the concern authority should develop a Recovery Management Plan to facilitate sequenced and prioritized direction for post-disaster reconstruction and rehabilitation. The Plan should advocate for Post-Disaster Need Assessment and Post-Flood Recovery Programme, connected with the sustainable development goals. Measures such as enhanced real-time flood forecasting GIS-based system, disaster management system, stricter building regulations and codes, disaster-resilient reconstructions. land-use mapping, flood zoning and flood insurance should be integrated with development planning to reduce vulnerability of communities and support longterm recovery. Disaster recovery centre should be established for having panel of experts from various sectors to assist in various phases of recovery. Appropriate institutional and financial mechanism should be developed for overall implementation and monitoring of the plan.

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![](_page_62_Picture_1.jpeg)

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