

# *Urban Land and Built Space Management*

## *Ensuring Equity of Built Space in Urban Areas*

*Pradeep. R*

Research Scholar  
Dept. Of Architecture, NIT-Calicut  
Kozhikode, Kerala  
Email: rpn1973@yahoo.com

*Dr.P.P.Anilkumar*

Associate Professor  
Dept. of Architecture, NIT-Calicut  
Kozhikode, Kerala  
Email:ppa@nitc.ac.in

**Abstract**— The urban built space management in India is a Pandora's Box for the authorities and planning professionals. The interventions without comprehending the situation has enhanced dichotomy, negated equity in access to urban land, promoted formation of slums, and intensified the development related problems. The functional aspects of urban area are neglected in urban built space management. Social equity, one of the sustainability aspects of development process is not being addressed in urban land management. The affordability of all sections of society has to be addressed to ensure equity and inclusiveness which are inevitable for sustainable development. This paper tries to critically review the urban built space regulations in the background of sustainability perspectives of urban planning and development.

**Keywords**—urban planning; urban land management; urban built space regulation; sustainability; equity;

### I. INTRODUCTION

Land is a non-renewable natural resource. Being terrestrial, for survival, human beings have to depend on land for which there is no alternative [1]. To sustain human life on earth land is very necessary. Not only for just survival, is land important component in the development history of human settlement [2]. More than that, "land is a metaphor for power, wealth and status" [3]. Being a terrestrial organism for human beings, land is very vital for existence of any system meant for his improvement in his status of life [4][5]. The management of this unique and non-renewable natural resource, is a riddle in third world countries. The social aspects of sustainable development perspective has put forth equity, inclusiveness and accessibility of land as a challenge for the authorities in urban development scenario [6]. The urban land management in India is not addressing the challenges thrown by urbanization, because of non-integration in the approaches of land administration and planning mechanisms for sustainable urban development.

This paper starts with the sustainability aspects in urban land management. Then it rationalizes the importance and it's inevitability in achieving sustainable development. Subsequently it discusses the functional aspect of urban land from urbanization angle. Unavoidability of built space in urban areas is discussed next. In the following part, the deficiencies of urban land management to ensure equity of built space in urban areas is detailed out. Next the role of

Development Control Regulations in regulating built space provision is analyzed. The concluding part identifies the gaps in built space and urban land management and deliberates what to be done for ensuring equity of built space in urban areas.

### II. SUSTAINABLE URBAN DEVELOPMENT

Sustainable development means, to meet the present needs without compromising the ability of future generation to meet their own needs. [7]. Sustainable development seeks to resolve the conflicts among aspects of economic development, ecological preservation, and intergenerational equity. [8]. Sustainability aims at bringing equal chances for all generations to come with respect to all natural resources including land. The initial broad definition of sustainable development has caused ambiguity among local authorities and planning professionals. What is being done in the name of development should be meaningful and worth for future generations. For sustainability urban development process has to be equitable, inclusive and result oriented.

Observing the migration trend all over the globe, it is estimated, near to half of the world population will live in urban areas by 2050 [9]. Also considering the sustainability issues and current trend of migration it has become critically important to make urban development process more sustainable through planning and regulatory mechanisms. The prime challenge is how to realize broadly mentioned principles of sustainable development in formulating policies, legislations, rules, regulations, programs for projects and how to determine the effective and efficient implementation [10]. Integration of land use and transport planning, inclusive planning of built space will be very important for ensuring sustainability.[11]. The governance systems, the development process guided by it, the process of urbanization, urban forms evolved, the development of livable built spaces, and the management of these built spaces to ensure its functional efficiency, etc. comes for discussion under the umbrella of sustainable development. Hence the governance aspects has to be discussed in detail.

### III. ROLE OF GOVERNANCE SYSTEMS

The concept of governance was first documented in Kautalya's Arthasasthra in 400BC. Human beings are social animals and like to live in organized manner by managing his

social, economic, ecological and physical environment. There is need for decision-making process for optimizing his actions. The whole process of decision making and executing is termed as governance. Daniel states that governance is processes of exercising authority of society over its territory [12]. Governance includes the institutional setup, legal or illegal instruments and all the functionaries to run the authority exercising mechanism. Legal support to planning and development of urban land is very fundamental without which planned orderly sustainable development is unachievable [13]. There are several types of governance systems. Of all these, democratic governance system is perceived as more sustainable, as it ensures better satisfaction level of individuals, since it enables people to exercise their option to choose from several choices provided. The legislations, policies, rules, regulations and mechanisms to formulation and enforcement through the institutional set up in governmental and nongovernmental organizations, in addition stake holders and citizens come under the umbrella of governance system.

Although, initially, the informal settlements formation in urban areas in third world countries were treated as illegal settlements and not accounted for planning and development by the government organizations, this perceptions has changed dramatically. In developing countries, authorities have recognized the informal governance systems, which has a patronage role in developing informal settlements in the form of slums in major cities [14]. Setting aside the slum eradication programs, now, governments has switched to slum improvement programs, which is an indication of inclusive approach for urban settlements. The generation of livelihood and dichotomy to access to built-space in urban areas is the root cause of formation of slums. In the case of slums, the illegally squatted land is almost fully occupied by built structures, without having any open areas to maintain livability. While formal governance system fails to address the demand of built space for low income or economically weaker section of the society, the informal system of governance steps in and provide patronage to build shelter for them resulting in creation of slums, but without considering the livability of these built spaces. For achieving sustainability the governance system has to be fully inclusive to ensure equity and should guarantee public participation. Built space is more demanded in urban centers and the phenomenon of urbanization has to be closely examined. Also the problems in urban centers is a challenge for urban planning professionals in India, without tackling these sustainable development can never be achieved.

#### IV. URBANIZATION - A NECESSARY EVIL

The inhabited areas are grouped into urban and rural settlements. In the rural areas, mainly the agricultural sector provides livelihood to the people, which directly depends on the agrarian economy and livelihood generation depends on the extent of land. In urban areas, for livelihood, majority of people depends on non-farming sector. Delineation of urban area is done by identifying the land where urban population is inhabited. The change in occupation structure of a settlement to depend more on non-farming sector for its livelihood triggers the process of urbanization. Once the process of

urbanization starts, it accelerates generation of non-agrarian livelihood opportunities and attracts more people from rural areas. The natural landscapes and agricultural fields, open areas in the urban area and its periphery are converted for urbanization. This trend is rapidly increasing in recent years and is expected to continue at a higher rate in coming decades[15]. Urbanization is an irreversible process. The land is a non-renewable, non-replaceable natural resource for urbanization, which in turn is inevitable in the process of socio-economic development. The ecological foot print concept [16] [17] suggests the minimum use of natural resources ensures sustainability as it supports intergenerational equity of natural resource. As the spatial extent of urbanization spreads out, it consumes more land that make the base of natural resources such as forests, wetlands, agricultural land etc. The use of more area on land for urbanization results in sprawled urban form for various activities, which, increases the need for car transport and car dependency [18], which will increase pollution; travel time, stress etc. and thereby reducing the individuals' quality time. Every chances for urban sprawl needs to be curbed as it is against sustainability.

Containing urbanization to a limited area and promoting intense land use is suggested for arresting urban sprawl as a major step towards achieving sustainable development [19]. Intense land use is achievable by accommodating more people and more activities in same extent of land. The optimized use of land by recycling of space is necessary for bringing the sustainability of development process through urbanization. The intensity and plurality of land use can be effectively regulated by understanding the functional aspect of urban land. Functionally urban land provides more livelihood opportunities in a lesser extent of land. This attracts more people to urban area. More the population in urban area, more and more livelihood opportunities are created. Being an irreversible process, once the land gets urbanized the natural landscape is changed and within a time period of immediate future generations, converting back to natural landscape is impossible. Urbanization will be more sustainable if it consumes lesser land and other resources. Built space demand is putting more pressure on urban land and their needs an approach more focused on the duality of built space and developable urban land.

#### V. URBAN BUILT SPACE AND LAND

Without built environment, forts,-the first urban form- would never have been possible, towns and cities would not have evolved, and developed. Without cities, civilization could never be established [20]. There is no civilization known without being tagged to an urbanized area. Urbanization is perceived as an inevitable process in development history of human beings. For urbanization built environment is necessary, and, for built environment land is an unavoidable resource.

Globally population trends show majority of population will live in urban areas within a few decades[15]. This shift in the pattern of livelihood from agrarian sector to non-agrarian sector increases the demand of built-space. In total, the process of urbanization changes the landscape from

more natural to more artificial. The land is a natural gift while built space is artificial creation. More buildings and built structures with supporting infrastructure determine the characteristics of urban areas. The rate of generation of livelihood in urban areas is more and is not depending on the extent of land but on urban population size and it needs livable built space to support the livelihood provisions and related economic activities.

Urban areas generate more livelihood in non-agrarian sector, attracts more people, triggering more livelihood generation independent of extent of land. Bare open land does not support livelihood provision in non-farming sector, yet, open space is essential to ensure the livability of built environment. The provision of built space on urban land and livability of built environment needs focus than providing land to each and every one. Attention should be more in providing equity in access to livable built space on land than bare land. It is the equity in housing and built spaces for accommodating the non-agrarian economic activities that needs focus than providing a piece of land for each. The escalation in demand of built spaces on the relatively inelastic supply of urban land causes escalation of land prices which are the root cause of obstacles to access to land, access to development rights, access to development assistance and maintenance [21]. Land is a limited natural resource, whereas demand of built space is ever increasing. Equity in provision of built space can be achieved only by sharing of land by more people. The present planning regulations does not address this issue. Planning parameters have to be formulated to promote sharing of land and assure access to affordable, livable built space.

Instead of comprehending the need and demand of built space, the planning authorities in India are still struggling to enable equity in the provision of habitable built space and has always restricted the built space by the carrying capacity of infrastructure as a constraint. But market forces has overcome this rude constraints either by circumventing regulations or breach of law by creation of illegal slums. Sometimes these mechanisms are overruled by special development interventions like transfer of development rights etc. These stringent control becomes irrelevant in actual provision of built space.

#### VI. URBAN LAND MANAGEMENT POLICIES- EXISTING SCENARIO IN INDIA

The objective of urban land management is to provide developable land in sufficient quantities for shelter and economic activities performed in the urban area [22] including space for circulation and other infrastructure to maintain the livability of built space constructed. Urban land management is focusing on tenure of land and not its functional use [23]. The urban planning regulations for built space provision are never accounted in urban land management. On the contrary, reality is that, it is the demand of built space that leads to urbanization of any inhabited area. The focus should be on the provision of built space on land than providing legal tenure of land parcels to all .

In the urban land-management practice in India, the demand of built-space is not addressed. It is built space demand that in

turn creates demand for developable land as it is the built space that supports livelihood for the population in any urban area. In addition, the livability of built space has to be ensured by optimizing open space provided around these built spaces. This built space factor has not come into consideration by authorities and needs more studies for rationalization. The built space provision is controlled by development control regulations in urban planning.

#### VII. PROVISION OF BUILT SPACE AND DEVELOPMENT CONTROL REGULATIONS

The built space provision on land is regulated by Floor Area Ratio (F.A.R) / Floor Space Index (F.S.I) and height restrictions stipulated in Master/Development Plans and related building bye laws. Whereas the open space around them is regulated by Coverage and setbacks. Unfortunately these regulations both FAR/FSI and Coverage are decided arbitrarily with little rationale. Conventionally FAR/FSI is decided by carrying capacity of infrastructure and neither population dynamics nor inelastic land resource available for urbanization is accounted.

Nevertheless, in practice this regulation works as a deterrent for addressing the ever increasing built space demand, all the same it is very insensitive to the location specific demand of built space. Mostly the FAR/FSI regulation are stipulated for specific uses as a maximum permissible limit which has no correlation with the location specific demand. In addition, these regulatory parameters never address the equity of built space and equitable access of developed or developable land.

The built space use is decided by the land use regulations in the Master Plan (if any) for urban areas. Zoning and regulations of Master Plans specify the density, intensity of land use, density of built space provision, infrastructural provision for different use zones[22]. The Master plans provide the basis of location specific development perspective on a temporal framework for any urban area. The Master Plan regulation can influence the land market, but these regulations are never accounted in urban land administration.

#### VIII. CONCLUSION

In India the urban land management is focusing only on allocation of the land when it is not only the land but built space on land with enough open area is the actual entity demanded in urban area. Urban land management policies existing, lacks focus on built space provision and livability of built space. For sustainable development there needs to ensure equity of livable built-space. In the present scenario the development control regulations of FAR/FSI and coverage, set back and height, regulates the provision of built space and open area around it, which is solely based on the carrying capacity of infrastructure provisions alone and are violated to disproportionate extents by some other legal or illegal mechanisms. The resultant provision of duality of built space and open space, neither meets the demand. The current urban land management techniques and built space control regulation are not enough to ensure equity of built space in

urban areas. Integration between urban land management and development regulatory provisions is essential for effective and efficient urban land management and to ensure sustainability in urban planning and development. Urban development regulatory parameter(s) must be formulated to ensure equity of built space provision through sharing of land for balanced development and utilization of land in urban area.

### References

- [1] Kulshreshta S.K, (2011) Process of Transformation of virgin land into resource for urban development, 59th National town and Country Planners' Congress, Institute of Town Planners of India. Technical papers (listed) 22-28.
- [2] Gupta J.K. (2011) Promoting sustainable development of urban land resource - issues and options; 59th National town and Country Planners' Congress, Institute of Town Planners of India. Technical papers (listed) 138-146
- [3] Nikita Sud , (2007); From land to the tiller to land liberalisation : The political Economy of Gujarat's Shifting land policy, Modern Asian Studies, Vol. 41 pp.603-637.
- [4] Harvey D. (1996), On Planning the Ideology of Planning; Readings in Planning Theory, Blackwell Oxford
- [5] Harvey D. (2001), A Companion to Marx Capital, Verso, London.
- [6] Sachitanandan.A.N. , (2011), Campaign for Urban sustainability, 59th National town and Country Planners' Congress, Institute of Town Planners of India. Technical papers (listed) 1-10.
- [7] Brundtland Commission (1987); Our Common Future- World Commission on Environment and Development.
- [8] Campbell Scott (1996) Green Cities, Growing cities, Just cities? Urban planning and the contradictions of Sustainable Development, Journal of American Planning Association.468
- [9] Kshirsagar J.B & R.Srinivas (2011) Urban and Management Policy perspectives. 59th National town and Country Planners' Congress, Institute of Town Planners of India. Technical papers (listed) 29-41
- [10] Healey, P., & Shaw, T. (1993). Planners, Plans and Sustainable Development. Regional Studies, 27(8), 769 - 776.
- [11] Pratap Raval, , (2011), India's challenge for sustainable development and planning of urban land , 59th National town and Country Planners' Congress, Institute of Town Planners of India. Technical papers (listed) 1-10.
- [12] Daniel Kaufmann, Aart Kraay (2008) Governance Indicators: Where Are We, Where Should We Be Going? World Bank.
- [13] Gupta.S.C (2011) Land as a resource for urban planning development : legal support- Planning, Development, and Land Management. 59th National town and Country Planners' Congress, Institute of Town Planners of India. Technical papers (listed) 272-279
- [14] Dowall, D. E. (1991). A tale of two cities: A comparison of Karachi's informal and formal housing delivery systems. University of California at Berkeley, Institute of urban and regional studies.
- [15] UNCHS (2001), Cities in a Globalizing World, Global Report on Human Settlements 2001, UNCHS (Habitat) Earth Scan Publications Ltd, London.
- [16] Rees, W. E. (1992). Ecological footprints and appropriated carrying capacity: what urban economics leaves out? Environment and Urbanization, 4(2), 121-130.
- [17] Rees, W. E., & Wackernagel, M. (1999). Monetary analysis: turning a blind eye on sustainability. Ecological Economic, 29(1), 47-52.
- [18] Newman, P. (2006). Sustainable Transport for Sustainable Cities. Issues, 6-10.
- [19] Yosef Rafeq Jabareen, (2006) Sustainable Urban Forms Their Typologies, Models, and Concepts Journal of Planning Education and Research; Association of Collegiate Schools of Planning.
- [20] Ashok Kumar (2011) Planning as accumulation by dispossession; 59th National town and Country Planners' Congress, Institute of Town Planners of India. Technical papers (listed) 156-166
- [21] Paul Baross (1957) Land supply for Low income housing issues and approaches Vol 8, No 4. Regional Development Dialogue
- [22] Wubalem Fekade, (2000) Deficits of formal urban land management and informal responses under rapid urban growth an international perspective, Habitat International 24 (2000) 127-150.
- [23] Farvacque, C., & McAuslan, P. (1992). Reforming urban land policies and institutions In Developing Countries. Urban Land Management Program. Washington, DC: The World Bank