

# **Fragmented Spatial Planning: Spatial planning process in India and the need for an environmental basis**

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## **Biography:**

Lolia Mary is an Environmental Planner and Architect with over seven years of professional experience in India. She has worked with NGOs, Government organisations, various research institutions as well as private organisations of national and international repute. Presently she is a consulting programme director to CERRE (Community Engagement for River Rejuvenation and Environment), a programme by TCF which is an NGO based out of Delhi.

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Kerala, a state in the southern region of India, along with many other regions in the Indian sub-continent, has been facing unprecedented rainfall extremes, leading to flash floods and landslides in the past few years (2017 and 2018). As evidenced and predicted, climate change extremes are real and here. The question we all are asking is, how prepared are our governments and our communities? The ownership, of the state of our neighbourhood, region, country or the world; lies both with our governments and with us as communities and individuals.

The recent floods and landslides accompanied by the overflowing dams during the rainfall extremes has left the people grappling for answers on what went wrong. While there has been intense debates on the immediate and recent actions/inactions, we continue to ignore some very fundamental and systemic institutional disconnects in the existing spatial planning and development mechanism.

This paper examines the following aspects of this issue;

- 1) Land Use/Spatial Master Plans
- 2) The Institutional Structures associated with Spatial Planning and Implementation
- 3) Spatial Planning - Implementation process and development on ground

Let us take the case of the Land Use Plans. A look at the publicly accessible website of the Department of Town and Country Planning, Government of Kerala, provides access to all the published Master Plans that are in force<sup>1</sup>. The Master Land Use Plans for all the 14 districts are available. Some key observations are;

- These plans provide a traditional land use based classification, following the basic information requirements and do not have any annexes regarding land suitability or maps showing un-developable or vulnerable/fragile landscapes. These are critical in helping citizens, implementing agencies and decision makers in making development choices. Organisations world wide, has shifted to suitability and vulnerability based mapping for making development decisions. Such an approach address the question of what kind and intensity of development can we have in a particular area of land, and not just what type of development we want. The latter is a query driven only by the need to accommodate growing population and urbanisation related built development, whereas the former recognises the intrinsic conditions and capacity of landscapes and natural resources.
- Local Area level plans are not available on the website. These plans should provide local information such as natural drainage/surface drainage flow, natural terrain along with the altered terrain formed as a result of new built developments, built density allowances etc. Building regulations and zoning regulation seldom translate itself into spatial information. This translation of written rules into maps goes a long way in informing common man as well as decision makers. Simplifying and translating

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<sup>1</sup> The link to the official website of the Department of Town and Country Planning, Government of Kerala-  
<http://townplanning.kerala.gov.in/2018/05/11/published-master-plans-in-force/>

information into visual maps also ensures greater accessibility and thereby transparency. Local Area level plans, should show other developmental controls related to heritage, environment and hazard zones. Presently, most of the local area plans and master plans prepared in India are devoid of this information, with some rare exceptions in the case of metropolitan cities.

- None of the master plans show the spatial extents of ecological systems in terms of their types, integrity, function or spatial connectivity. There is serious lacuna among planning professional with regard to how natural systems such as surface drainage flow, landscape types, water bodies and terrain etc., function as an integrated dynamic system.

For eg; Urbanisation or agricultural expansion reduces surrounding forest areas to smaller patches. When these forest patches are completely isolated they under ecological transformation as the species diversity and thereby habitat functions are lost. This would mean loss of critical ecosystem functions and services which are vital in building climate change resilience in the region. Identification of compatible landscape patches and corridors based on typology, can help restore and reverse the process of degradation. USA and many European nations recognises this and ensures that such habitats are not fragmented by motorways or other development. Landscape corridors are a norm in many of these countries in cases where such development is unavoidable.

The institutional structures associated with spatial planning and implementation is the machinery to help, prepare, and implement spatial development plans. In India, since it is a state function, it falls under the purview of state governments to prepare and implement spatial development plans even though the federal/central government plays a role in special cases, schemes and also in guiding the states. Every State has its government department of town and country planning which oversees the functions. In the case of the state of Kerala, each of the 14 districts has a Town and Country Planning Office staffed with town planning professionals and other support staff.

The 73rd and 74th amendments of the constitution, has facilitated the formation of urban local bodies and panchayat raj institutions for cities, towns and gram panchayats to enable grass root level planning and local governance; thus decentralising the process of development planning and governance to a great degree. While Kerala has lead the way in implementing local self governance through Municipalities and Panchayats, it still has to go a long way to enable urban local bodies (ULBs) and panchayats raj institutions (PRIs) in preparing and implementing spatial development plans. There are many underlying issues with this regard.

- Plan Preparation: There is grave shortage of planning professionals and skilled officials. According to the Unesco Global Education Monitoring report 2019, India requires three hundred thousand town and country planning professionals by 2031. Currently, it is one planning professional for four hundred thousand people in a country of 1.3 billion, which is a mere 3300 planning professionals.
- Plan Implementation and Approval: The process of approval of site plans and layouts for construction continues to be dealt in the traditional way. Even though there has been considerable progress in digitising the review and approval of plans, the reference (local area plan or land survey maps) based on which the planning or municipal officers approves the plans are not made available openly. This allows for manipulation and thus discrepancies.
- Training and Capacity Building of Implementing officers: There is an urgency for regular training updates on amendments to laws and other regulatory tools, to all existing municipal and panchayat raj officials. Given the rapid nature of urbanisation and development, many a times, the training provided is too late or too little. Many officials find themselves unaware of recent schemes, programmes, amendment to rules and regulations etc.
- Awareness campaigns and community participation: Citizens and communities often blame the government without knowing their role in evolving better systems and institutional structures of planning and governance. It is important that all ULB and PRIs actively take up regular awareness campaigns to educate citizens about their role in plan preparation and implementation process. Communities are the primary institutional structures in grass root level planning. Participatory planning with aware and empowered citizens forms the foundation of planning in democratic systems.

The third aspect is much more complex and concerns the planning process against the pace of development on ground. It is the question of how spatial planning is in sync with the pace of development on ground and how development on ground is in sync with spatial plans. It is rather a chicken and egg puzzle.

- Our spatial plan preparation and approval process is slow paced, while development on ground takes a leap. The time taken to prepare and approve a master plan is typically 2-3 years on an average. In some cases it has been longer due to other delays. A spatial plan for future thus seldom align with development on ground.
- Individual sites and alteration of terrain: Currently, site level construction relies on ground level references from survey maps and of adjacent plots. Every new construction raises its ground level from the adjacent plot. This done over a year can considerably change the local surface drainage pattern especially with hardscape surfaces. Hence new low lying areas are created altering the drainage pattern in a short time. This cannot be resolved easily, as the terrain alteration done on day to day basis is impractical to track. This has also lead to the drying of natural ponds, wetlands and lakes in urban landscapes. This is a very common occurrence with many towns and cities in India. If this continues, so will urban flooding, because changes to terrain is unregulated. To resolve this it is important to establish allowable ground levels and terrain guidelines for the city landscape. The building and layout approval process should then be with reference to this information apart from setbacks and coverage of the built structures on the site.

While there are many other nuances within each of these issues and possible solutions, it is important that we initiate this change as planning professionals. It will go a long way in building resilience against climate change extremes, if we can adapt and evolve our spatial planning process by anchoring them on the intrinsic ecological capacity of the land. Many of the concerns stated have a solution that is anchored on the spatial and functional nature of the ecological/environmental system existing in a given area; be it forest systems, systems of water bodies, terrain or surface drainage networks. The increasing pace and ever changing dynamics of development, climate change and technology only increases the urgency for a shift in our planning process.