POLICY BRIEF

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River-Sensitive Urban Planning in the Ganga Basin:

Where Do Master Plans Stand?

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1. Introduction

Urban centres along the Ganga River have emerged as significant contributors to the pollution loads entering the river and its tributaries. This reality has long shaped the response strategies of river clean-up initiatives, beginning with the Ganga Action Plan phases 1 and 2, which primarily emphasized infrastructural interventions such as sewage diversion and treatment facilities. However, many of these measures remained oriented towards mitigating the impacts of pollution at the point where it enters the river, rather than addressing the systemic urban sources of pollution more holistically.

The Namami Gange Programme (NGP) initiated an epistemic shift by recognising cities as integral components of the river ecosystem. While the NGP continues to prioritise the infrastructural interventions, the reframing of its approach to tackling river pollution brings about a more comprehensive and coherent approach to urban river pollution, beyond isolated infrastructural solutions. The River City Alliance (RCA) initiated by the NMCG is a step towards realising this.

This new imagination of urban-river relationships has begun to influence national policy discourse. Urban planning instruments, particularly the Master Plan, are increasingly being seen as vehicles for embedding river ecosystem health within the core of urban governance. This emanates from the nature of the Master Plan tool itself- as its influence on the structure and growth of Indian cities remains unparalleled. It continues to be the most authoritative mechanism for defining urban spatial futures and therefore remains the sole statutory tool that can integrate the agenda of river ecosystem health. The Ministry of Housing and Urban Affairs (MoHUA), through its 2020 guidelines, has underscored the need for integrating river rejuvenation concerns into statutory planning frameworks such as the Master Plan. The Urban River Management Plans (URMPs) developed by NMCG and NIUA seeks to incorporate water-sensitive prioritise within the statutory master plan instrument.

This policy brief takes the Master Plan as a critical point of investigation to explore the status or coverage achieved by this instrument in the Ganga Basin States (GBS).

2. Problem Statement

The Ganga River basin is the largest of the basins of India with an area of 8,61,452 sq.km in India, draining 11 states of the country- Uttarakhand, Uttar Pradesh, Haryana, Himachal Pradesh, Delhi, Bihar, Jharkhand, Rajasthan, Madhya Pradesh, Chhattisgarh and West Bengal (CWC and NRSC, 2014, p. iii). Out of these 11 states, significant portion of northern and eastern India falls within the expansive Ganga basin, encompassing states of Uttarakhand, Uttar Pradesh, Bihar, and West Bengal. These states rely heavily on the ecosystem of the Ganga basin for their agriculture and allied economic activities, benefitting from fertile plains and ample water resources.

Water bodies like rivers have historically shaped urbanisation process and continues to do so in the Ganga basin. In the Ganga basin, 'most of the cities, towns and industrial units in the basin are located at the bank of Ganga, its offshoot canals and its tributaries' (IITs 52, 2013, p.6). The GRBMP report points out how such urban centres and industrial units not only draw water from rivers for their various needs but also release untreated sewage and industrial effluents into them, adversely affecting both quantity as well as quality of water in the rivers. Interestingly, the reports also point out that even sewage from cities and wastewater discharges from industrial units which are located far away from the river bank are also drained into the river, directly or indirectly through the drainage system, showcasing the prominent and crucial dependence that the industries and urban centres have on the Ganga river and its tributaries. The Ganga basin has vast water resources in form of surface and ground water resources. In the basin there are 2,76,947 surface water bodies in the form of lakes, ponds, reservoirs, tanks etc. (CWC and NRSC, 2014, p. iii). However, with rampant urbanisation, these water bodies are exposed to risk of disappearance, pollution and contamination.

3. Policy Context

Given this context, spatial planning must refocus on water bodies as integral to the urban fabric and explore how this renewed emphasis on urban water bodies to target pollution under the NGP can be effectively institutionalised within the dynamics of ongoing urbanisation. The dual role played by statutory spatial planning tools like the Master Plan in protecting urban water bodies and planning the urban centres while accounting for the water bodies becomes crucial.

However, there remains a severe lag in the number of statutory towns in the basin states vs the number of master plans that has been prepared. Kumar et. al. (2021. pp. 211-212) points out that as of 2016, out of 4041 statutory towns, only 1638 had approved master plans with 363 plans under preparation. The situation was even worse for census towns where 591 towns had approved master plans against a number of 3892 towns. This shows that only 33% of the towns (statutory and Census) of the country had a master plan. The number of urban centres within the basin that are covered by statutory Master Plans remains limited. The initiative to protect urban water bodies through the preparation of Urban River Management Plans (URMPs) is still at a nascent stage. Unless the recommendations of URMPs are systematically integrated into statutory Master Plans, the protection of urban water bodies will remain an ad-hoc governance response rather than a coherent and sustained priority within India's urban policy framework.

4. Analysis

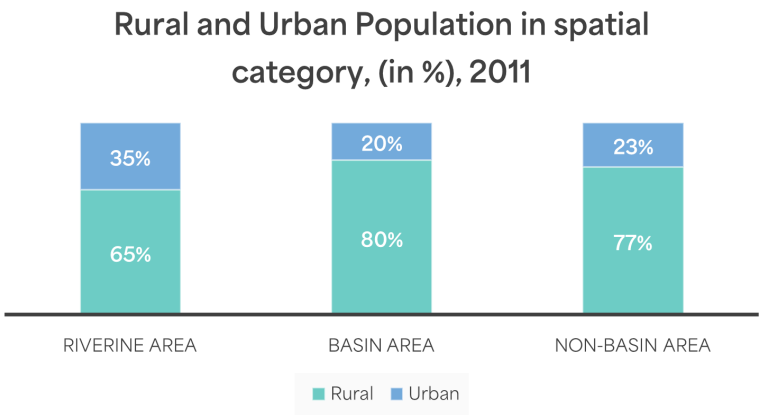
4.1 Concentration of urban areas along rivers in the Ganga basin

The total population of the GBS is 65 crores of which 21 crores reside in the riverine area. The riverine area, for the purpose of this analysis has been defined as 25 km on either side of the Ganga and 10 km on either side of its tributaries. Out of the total population, 16 crores inhabit urban areas with 12 crores concentrated within the riverine and basin areas alone.

Out of these 16 crores urban inhabitants in the GBS, the riverine area accounts for the largest share, supporting 7 crores inhabitants. The area also supports an exceptionally high population density, at 45,335 persons per sq. km., against 1,362 persons per sq. km. in rural areas. Within the Ganga Basin, the riverine area is also the most urbanised, with an urbanisation rate of 35%. Such a population distribution shows a significant presence of the urban in close proximity to the river and therefore makes the riverine area central to spatial urban planning in GBS.

A breakdown by State-level also reinforces this trend. 45% of the total urban population in the GBS is concentrated in the riverine areas. West Bengal has the highest with 70% of its urban population being located in the riverine area, followed by Uttar Pradesh with 62% of its urban population, Bihar with 56% of its urban population. Delhi NCR with 87% is of course the known outlier.

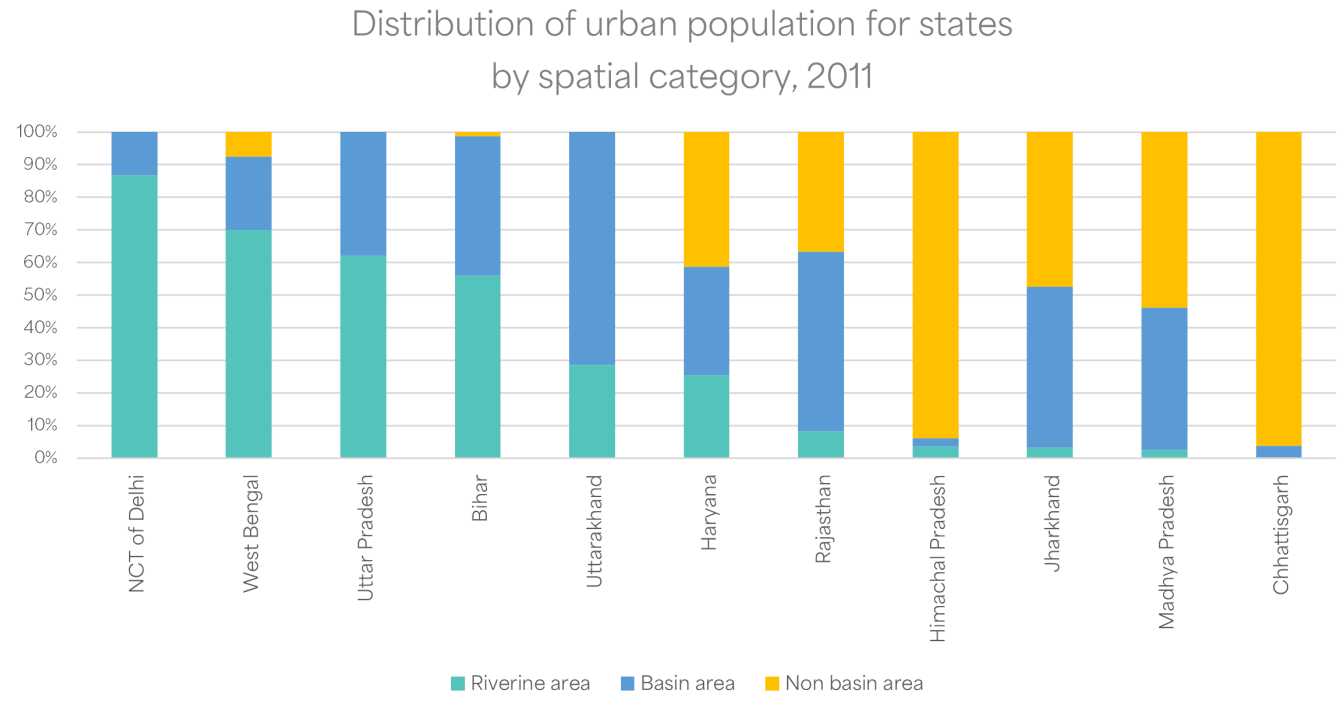
Fig: Distribution urban population for Ganga Basin States by spatial categories, 2011



Source: Calculations based on Census of India 2011, Primary Census Abstract – Village and Town Directory, Office of the Registrar General & Census Commissioner, Ministry of Home Affairs, Government of India.

This pattern of distribution of urban population shows the critical importance of rivers and riverine areas as corridors of urban concentration. Simultaneously, riverine urban areas face significant pressure to safeguard the quality and ecology of its rivers and other water bodies. There is therefore an urgent need to reimagine spatial planning tools to accommodate water-sensitive urban planning practices.

Fig: Distribution urban population for Ganga Basin States by spatial categories, 2011



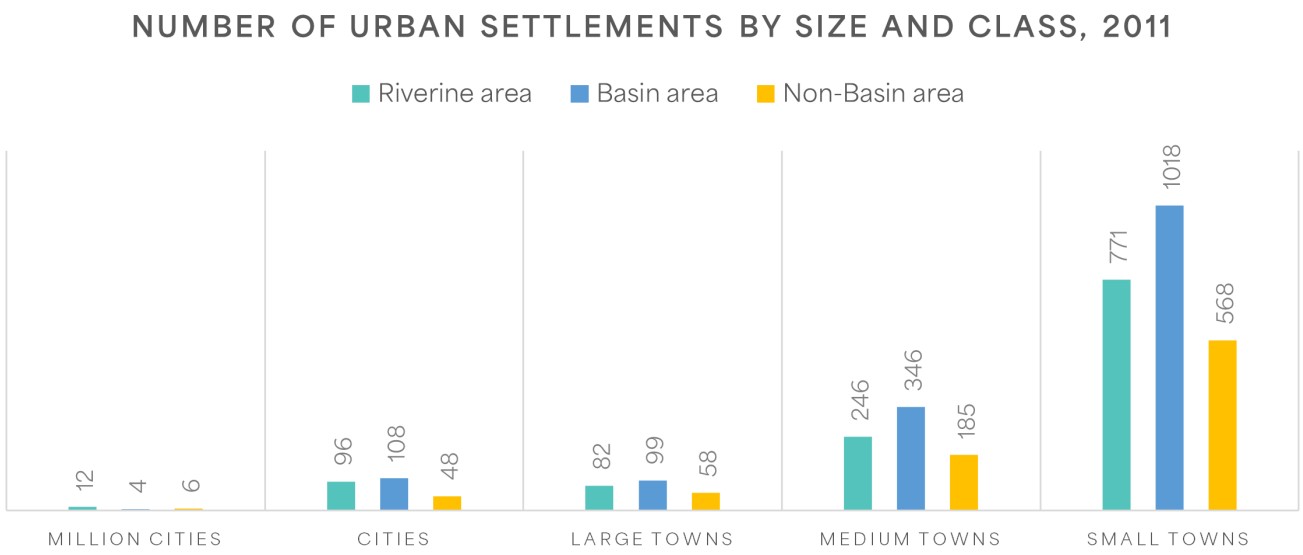
Source: Calculations based on Census of India 2011, Primary Census Abstract - Village and Town Directory, Office of the Registrar General & Census Commissioner, Ministry of Home Affairs, Government of India.

The riverine area has 108 cities. There are 22 million-plus cities located across the entire Ganga basin, of which 12 are located on the riverine area alone, thereby supporting one of the highest concentrations of urban population across a singular geographical region in the entire country. 4 million-plus cities are located in the basin area; making the Ganga basin region home to 16 million plus cities.

6 of these million-plus cities are located in Uttar Pradesh – Meerut, Agra, Prayagraj, Kanpur, Lucknow and Varanasi. 2 are located in West Bengal – Kolkata and Howrah, while Bihar has one – Patna. Delhi NCR spans across both the banks of Yamuna and comprises the largest urban agglomeration in the Ganga basin.

Apart from the million-plus cities, the riverine area also supports a substantial number of cities. In the riverine area, Bihar has 13 cities, Uttar Pradesh has 26 and West Bengal has 41 cities.

Fig: Number of urban settlements by size and class in the Ganga basin states, disaggregated into riverine, basin and non-basin areas, 2011



Source: Calculations based on Census of India 2011, Primary Census Abstract - Village and Town Directory, Office of the Registrar General & Census Commissioner, Ministry of Home Affairs, Government of India.

This patten of urban distribution reinstates the central role of the riverine area as the most urbanised zone within the GBS. This makes the riverine area a critical geographical belt for any spatial planning interventions. Since urbanisation is dense and influenced by proximity to rivers, water-sensitive urban planning interventions is not only a desired planning criteria but an urban spatial necessity. The rivers and other urban water body in the GBM faces intense pressures of development owing to the sheer volume of demographic distribution and aspirations of economic growth while facing increasing adverse impacts of environmental changes driven by climate change. The Master Plan, with its statutory mandate therefore becomes the critical planning intervention that governance of such water-sensitive urbanisation requires.

4.2 Existing spatial planning response in the Ganga Basin

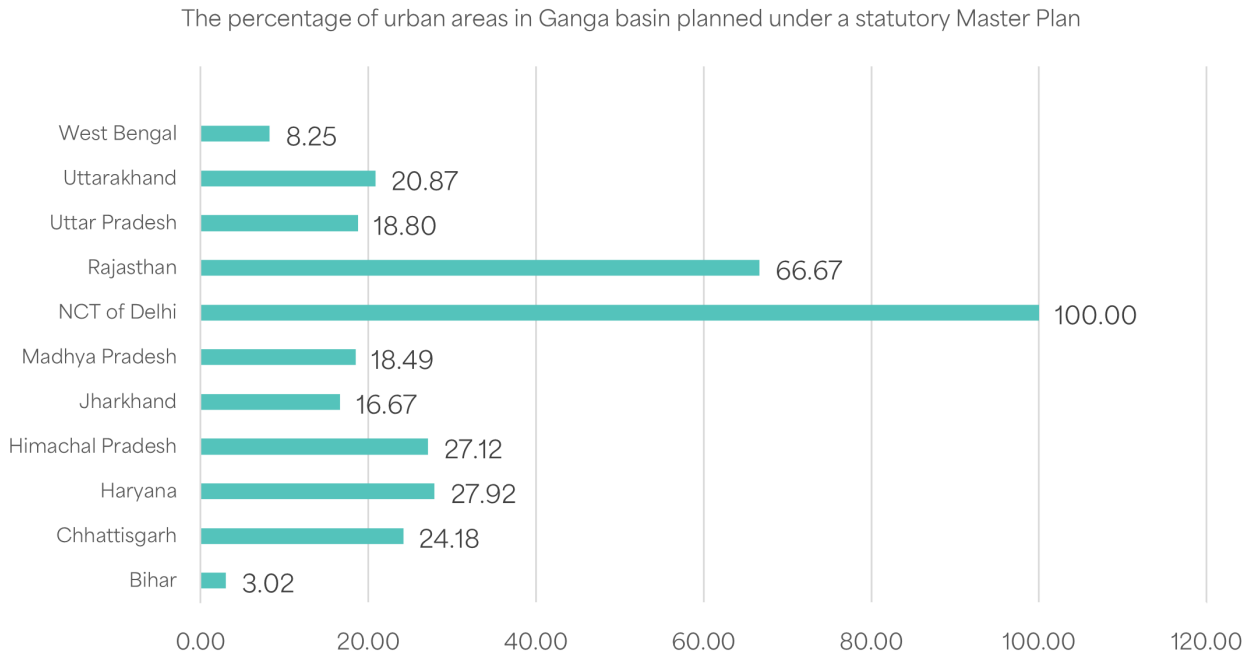
In order to arrive at a comprehensive assessment of the current state of existing spatial planning frameworks in the GBS, the following key parameters have been examined:

1. Urban areas in the GBS which has statutory Master Plans
2. Distribution of urban settlements which has statutory Master Plans by state-wise and by Riverine, Basin and non-basin areas categories
3. Distribution of urban settlements which has statutory Master Plans by urban categories in Riverine, Basin and Non-basin areas at State-level
4. Master Plans prepared under AMRUT
5. Master Plans for Census Towns

4.2.1 Urban areas in the GBS which has statutory Master Plans

Out of 3647 urban settlements of the GBS, only 817 has a Master Plans: showing that only 22.4% of the urban in GBS is even covered under a statutory planning framework. Excluding the NCR of Delhi, the state of Rajasthan with has the highest proportion of its urban areas covered by a Master Plan, with 66.67%. However, among the core basin states, Uttarakhand has 20.87% of its urban areas covered under a Master Plan, followed by Uttar Pradesh at 18.8% and West Bengal at 8.25%. Bihar has only 3% of its urban areas covered under the Master Plan. This highlights a dismally low implementation of spatial planning with the statututory Master Plan covering only a fraction of urban areas in the core basin states. A substantial section of urbanisation in the Ganga Basin continues outside the ambit of statutory Master Plans.

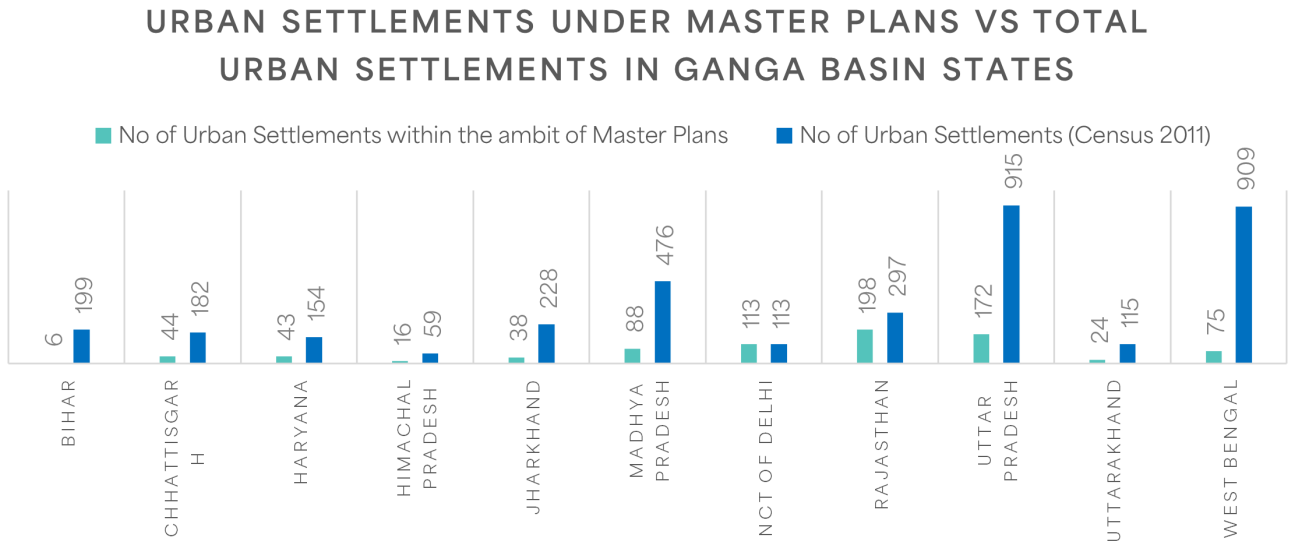
Fig: Percentage of urban areas within the Ganga basin covered by statutory Master Plans



Source: Calculations for urban settlements is based on Census of India 2011, Primary Census Abstract - Village and Town Directory, and Calculations for availability of Master Plans is based on (UPTPD, 2024), (UHUDA, 2024), (TCPHARYANA, 2024), (UDHDJH, 2024), (TPDRJ, 2024), (TCPCG, 2024), (MPTP, 2024), (DDA, 2024), (UDHDBH, 2024), (DTCPHP, 2024)

A state-wise breakdown of the number of urban centres currently covered by Master Plans highlights this gap in coverage of spatial planning. The figure below shows the crucial gap in coverage for each state of the Ganga Basin.

Fig: Comparative Availability of Master Plans in Urban Centres across Ganga Basin States



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Uttar Pradesh, the most populous state within the Ganga Basin and in India has only 18.8% of its urban areas covered as only 172 out of 915 urban settlements has Master Plans. West Bengal with 75 out of 909 urban areas covered under Master Plans has a coverage of 8.3%. Bihar has only 6 out of 199 urban settlements, just 3%, under Master Plans.

This limited coverage of Master Plans for the most populous and critical states of the Ganga Basin underscores the significant gaps in spatial planning.

4.2.2 Distribution of urban settlements which has statutory Master Plans by categories- state-wise and by Riverine, Basin and non-basin areas

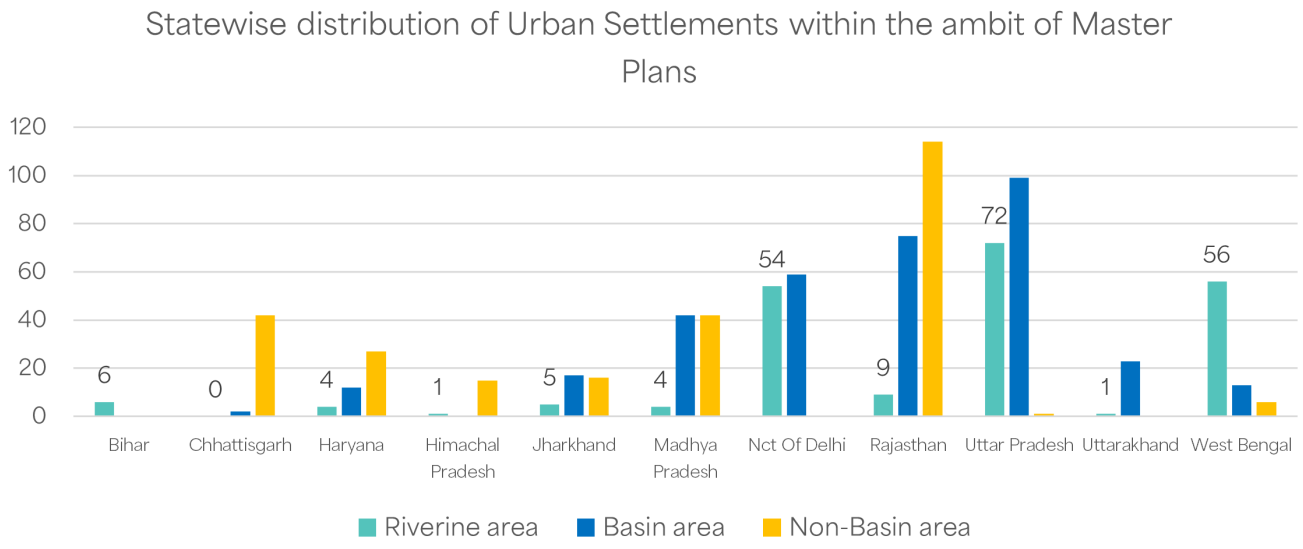
Out of a total of 817 urban settlements in the entire basin covered by Master Plans, 26% i.e. 212 urban settlements lie in the riverine area. This translates into an absence of Master Plans for the remaining 74% of urban areas lying in the crucial riverine area. The largest proportion of coverage has been achieved for the urban areas in the basin area- with 42%, i.e. 342 urban settlements being covered. This shows an absence of Master Plans for 58% of urban areas in the basin areas. Outside the basin area, 263 (32%) has been covered under the Master Plans.

This distribution points out how less than one-third of the urban areas of the crucial riverine areas are covered by a Master Plan.

In Uttar Pradesh, 72 urban settlements in riverine areas and 99 urban settlements in the basin area is covered by Master Plans. In West Bengal, there are Master Plans for 56 urban settlements in the riverine areas and only 13 basin urban settlements are covered. For Bihar, 6 urban settlements in the riverine areas have Master Plans, whereas no urban settlement in the basin area is covered under Master Plans.

In the figure below, this aggregation of urban settlements within the ambit of Master Plans has been depicted, with absolute numbers highlighted for urban located in the riverine areas.

Fig: State wise distribution of urban settlements within the ambit of the Master Plans as seen within the Riverine area, basin area and non-basin area



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4.2.3 Distribution of urban settlements which has statutory Master Plans by urban categories in Riverine, Basin and Non-basin areas at State-level

This section provides a detailed break-down of the coverage of Master Plans for urban areas across four population cohorts: million plus cities, cities, large towns and medium towns, disaggregated by their geographical location – in the riverine areas, basin and non-basin areas.

This analysis shows that the focus of spatial planning in the GBS has remained on the largest cities – the million plus cities, as all of them have been covered by Master Plans. The coverage of statutory spatial plans declines as we move down the urban hierarchy- to cities and then to large towns and medium towns. Cities are covered moderately, whereas there is scant coverage for large and medium towns. Towns with population 1,00,000 and below has the least coverage under Master plans. This shows a consistent policy emphasis on metropolitan scale planning rather than the smaller urban areas in the Ganga basin.

a. Master Plan coverage for million plus cities:

Across the Ganga basin, there are 22 million plus cities, 16 in the entire Ganga basin and 12 in the riverine area. This brings out the central role of the Ganga and its tributaries in shaping urban spatial distribution, with proximity to rivers emerging as a historically decisive factor shaping urbanisation. There is universal coverage of Master Plans for these million-plus cities. Delhi NCR, Meerut, Agra, Prayagraj, Kanpur, Lucknow and Varanasi in Uttar Pradesh, Kolkata and Howrah in West Bengal and Patna in Bihar are crucial million plus cities in the riverine areas which are all covered by Master Plans.

This pattern of urban distribution where the largest cities of the basin are predominately riverine reemphasises the significance of reimagining the statutory master plan to accommodate water-sensitive provisions. Notably, every million plus city in the GBS is covered by a master plan which ensures its viability to act as an anchor to managing and promoting water-sensitive urban growth in the basin.

b. Master Plan coverage for the cities (population 1,00,000 – 10,00,000)

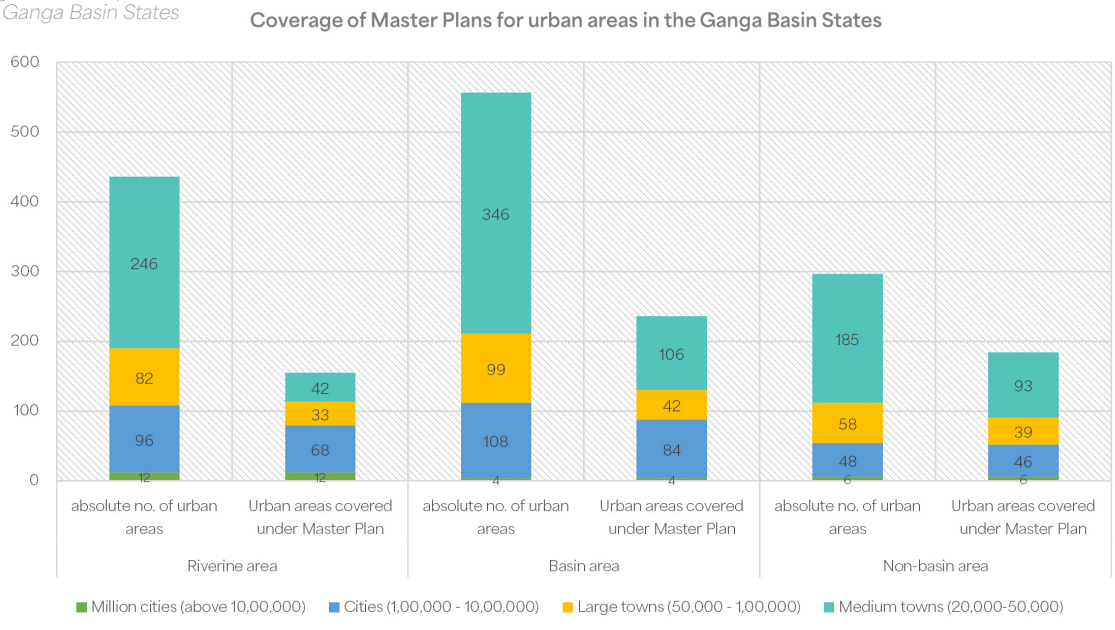
Cities are also relatively well-covered by Master Plans in the GBS. Out of a total of 96 urban settlements located in the riverine area, 68 has Master Plans, showing a coverage of approximately 71%. The coverage for cities is best in the basin area, where out of 108 urban settlements, 84 cities have a master plan, reflecting a coverage of around 78%. The master plan coverage is the highest for cities located outside the basin area in the GBS, where 46 out 48 cities have master plans, showing a 98% coverage.

This picture shows that the good coverage already achieved by spatial plans for the cities in the GBS can be leveraged to introduce water-sensitive planning practices. For the cities located in the riverine area which have not yet been covered under a master plan, existing water-sensitive frameworks such as the URMPs can be embedded in the master plan right from the very outset of plan preparation. In this category, like in the million plus cities, Master Planning can become the method and anchor for targeted interventions for protecting and managing urban water bodies more effectively.

c. Master Plan coverage for the Large Towns (population 50,000 – 1,00,000)

A sharp decline in Master Plan coverage becomes evident once we move down the urban hierarchy. For the large towns in the GBS, the coverage achieved by spatial plans becomes insufficient. In the crucial riverine area, only 33 out of 82 towns has a master plan, translating into a coverage of only 40%. In the basin area, the coverage is 42%, with 42 out of 99 towns having a master plan. In non-basin areas, 39 out of 58 towns, around 67% are covered by Master Plans. This pattern of coverage achieved by Master plans indicates a significant gap in planning efforts where the urban in the most crucial riverine area remain outside the ambit of statutory planning interventions.

Fig: Coverage of Master plans for urban areas in the Ganga Basin States



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d. Master Plan Coverage for the medium towns (population 20,000 – 50,000)

This category of urban has the least coverage of Master plans. In the riverine area, only 42 out of 246 towns have a Master Plan, showing a low coverage of 17%. In the basin area, 106 out of 346 towns have a Master plan, a coverage of 31%. Non-basin towns again, are better covered, with 93 out of 185 towns having a Master Plan, showing a coverage of 50%.

This pattern of coverage for the medium and large towns, and also for cities shows that there is a clear co-relation between population size and planning priorities. The larger urban centres are more consistently planned. However, as the categories are disaggregated, the urban settlements in the riverine area lack coverage under Master Plans, even when water-sensitivity is a crucial requirement for the urban of the Ganga basin.

4.2.4 Master Plans prepared under AMRUT

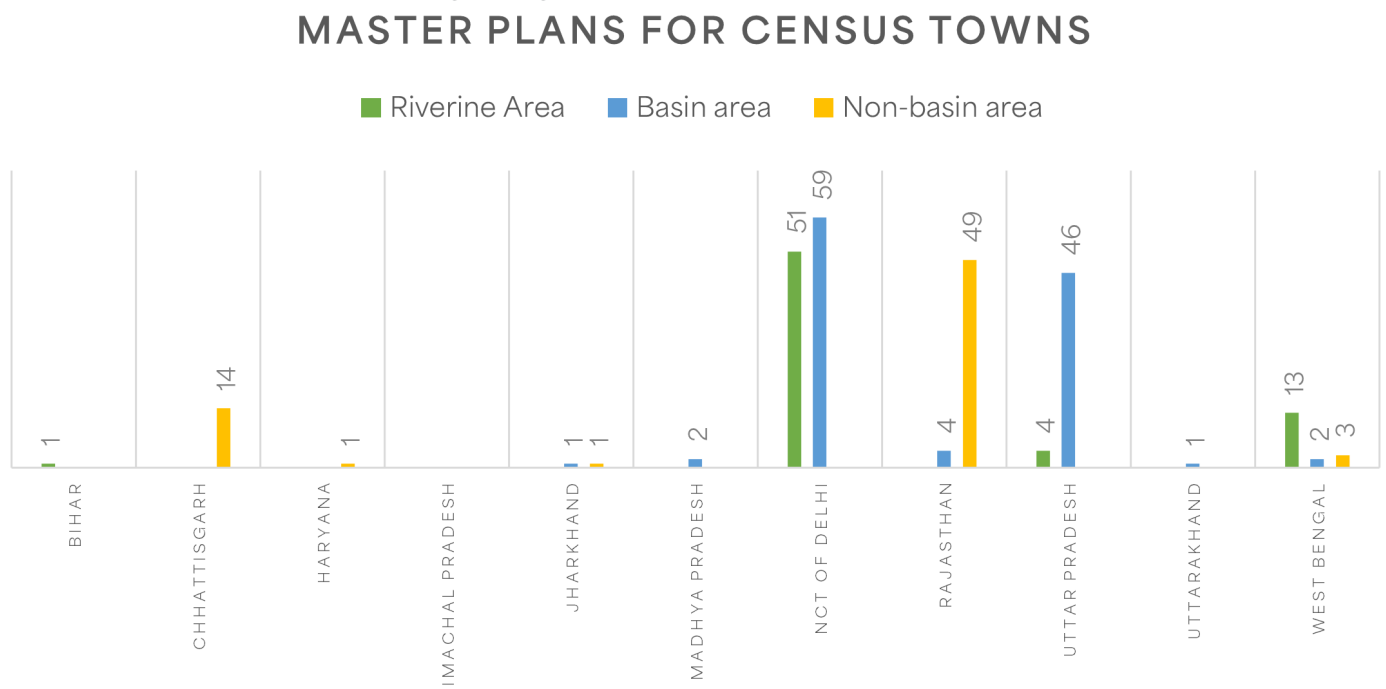
As a part of the AMRUT (Atal Mission for Rejuvenation and Urban Transformation) flagship urban development program, GIS-based Master Plans are being prepared for cities across the country with the objective of strengthening the reach of spatial planning efforts.

Under AMRUT, a total of 213 master plans has been prepared for five states within the Ganga basin. The highest number of plans has been prepared for Uttar Pradesh – 63 plans, followed by 61 plans for Rajasthan. The other three states include West Bengal, Madhya Pradesh and Himachal Pradesh with 43, 38 and 8 GIS-based master plans respectively. An exhaustive list of all urban centres covered by AMRUT based Master plans has been provided in the appendix.

4.2.5 Master Plans for Census Towns

Among the 817 urban settlements in the GBS covered by Master Plans, 252 are Census Towns (CTs), indicating a 30.8% coverage of CTs within the spatial planning process. Among the CTs, 27.4% are located in the riverine area, 45.6% lies in the basin area and 27% lies in the non-basin area.

Fig: Coverage of Census Towns under Master Plans



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This proportion of coverage of CTs in the riverine area is skewed by the concentration of CTs in the NCR of Delhi, where 51 out of 69 CTs are covered under the Delhi Master Plan. The gap in coverage for CTs emerges when we look into the riverine area of the states, where West Bengal has only 13 CTs covered under Master Plans, Uttar Pradesh has 4 and Bihar has just 1 CT covered under Master Plans.

In the basin area, 115 CTs are covered by Master Plans. State-wise disaggregation shows that 59 CTs lie within the NCR of Delhi and the rest of the CTs for the state are: Rajasthan has 4, Madhya Pradesh and West Bengal has 2 each and Jharkhand and Uttarakhand have one each. In the non-basin area, the coverage of the CTs is slightly better. Rajasthan has 49 out of 68 CTs covered by Master plans, Chhattisgarh has 14, West Bengal has 3 whereas Haryana and Jharkhand have 1 each.

This distribution shows that meaningful inclusion of CTs has only been achieved under the Delhi NCR Master Plan. CTs in the riverine area continues to grow without accounting for water-sensitive spatial plans in place.

5. Policy Recommendations

The following steps can help towards achieving a water-sensitive statutory urban planning in the Ganga basin:

1. All the 22 million plus cities in the Ganga states are covered by Master Plans. 12 such cities are located either on the Ganga or on its tributaries. Keeping this in view, NMCG could foreground the Master Plan as the governing paradigm to implement long term water-sensitive concerns.

2. URMPs could be prepared as priority for these cities and integrated with the Master Plansof million plus cities.

3. Within the Ganga basin, while a majority of cities have Master Plans, a substantial section remains uncovered. NMCG could guide the inclusion of water-sensitive provisions right from the beginning stage of Master Plan preparation for these cities. The URMP framework can be used as a mandatory reference document for plan preparation.

4. There is a severe lack of Master Plan for large and medium towns in the Ganga Basin. The NMCG could leverage the RCA platform to implement water-sensitive projects in such towns.

5. Based on the coverage achieved by the Master Plans in the Ganga basin towns, the NMCG could plan scaled-down, community-centric engagements for medium and emerging towns to generate know-how and water sensitivity in such towns. NMCG could leverage its community platforms such Jan Ganga, Ganga Utsav, Ganga Mashal, and Ganga Amantran to generate a people-river connect at the grassroots.

6. Build a framework for coordination between NIUA, state-planning bodies and municipalities to standardise water-sensitive planning frameworks, especially for reviewing and approving Master Plans.

6. Conclusion

The current spatial planning response in the GBS are inadequate to accommodate water-sensitive urban development. A substantial section of urbanisation in the Ganga Basin continues outside the ambit of statutory Master Plans. Out of a total of 817 urban settlements in the entire basin covered by Master Plans, 26% i.e. 212 urban settlements lie in the riverine area. This translates into an absence of Master Plans for the remaining 74% of urban areas lying in the crucial riverine area.

A detailed break-down of the coverage of Master Plans for urban areas across four population cohorts: million plus cities, cities, large towns and medium towns, disaggregated by their geographical location—in the riverine areas, basin and non-basin areas shows that the focus of spatial planning in the GBS has remained on the largest cities—the million plus cities, as all of them have been covered by Master Plans. The coverage of statutory spatial plans declines as we move down the urban hierarchy- to cities and then to large towns and medium towns. Cities are covered moderately, whereas there is scant coverage for large and medium towns. This pattern of coverage for the medium and large towns, and also for cities shows that there is a clear co-relation between population size and planning priorities. The larger urban centres are more consistently planned. However, as the categories are disaggregated, the urban settlements in the riverine area lack coverage under Master Plans, even when water-sensitivity is a crucial requirement for the urban of the Ganga basin.

The analysis has shown the central role of the riverine area as the most urbanised zone within the GBS, which makes the riverine area a critical geographical belt for any spatial planning interventions. Since urbanisation is dense and influenced by proximity to rivers, the Master Plan, with its statutory mandate becomes the critical planning intervention that water-sensitive urbanisation requires. Policy frameworks must allow for accommodating planning frameworks that caters to an ecologically sensitive urban development while ensuring that water-bodies in the GBS are governed as ecological infrastructure embedded within the urban even when urbanisation in the region continues unabated.

References

DDA. (2024, September 27). Master Plan. Retrieved from Delhi Development Authority: https://dda.gov.in/master-plans

DTCPHP. (2024, September 27). Development Plan. Retrieved from Department of Town and Country Planning, Government of Himachal Pradesh: https://tcp.hp.gov.in/developmentPlan/development-plan

Kumar, A, Vidyarthi, S and Prakash, P. (2021). City Planning in India, 1947-2017. Routledge, London and New York

MPTP. (2024, September 27). Development Plan. Retrieved from Directorate of Town and Country Planning, Government of Madhya Pradesh: https://www.mptownplan.gov.in/map.html

TCPCG. (2024, August 27). District wise development plan information. Retrieved from Directorate of Town and Country Planning, Chhattisgarh: https://tcp.cg.gov.in/VY.htm

TCPHARYANA. (2024, August 27). Development Plans and Notifications. Retrieved from Department of Town & Country Planning, Government of Haryana: https://tcpharyana.gov.in/developmentplan.htm

TPDRJ. (2024, August 27). Master Plan. Retrieved from Town Planning Department: https://urban.rajasthan.gov.in/townplanning/#/sm/department-order/353426/384/31/2953

UDHDBH. (2024, September 27). Patna Master Plan 2031. Retrieved from Urban Development and Housing Department: http://udhd.bihar.gov.in/PMP2031/

UDHDJH. (2024, September 27). ULB wise Master Plan. Retrieved from Urban Development & Housing Department: https://udhd.jharkhand.gov.in/Programs/MasterPlans.aspx

UHUDA. (2024, August 27). Uttarakhand Housing and Urban Development Authority. Retrieved from Uttarakhand Housing and Urban Development Authority: https://uhuda.uk.gov.in/

UPTPD. (2024, August 27). Development Area. Retrieved from Town & Country Planning Department Uttar Pradesh: https://uptownplanning.gov.in/page/en/development-area-(da)