

UPSC CSE | APSC CCE

COMPREHENSIVE STUDY MODULE

Water Governance in Peri-Urban Areas

GS Paper II & III | Environment, Governance, Infrastructure, Polity

A 14-Section Analytical Framework for Civil Services Aspirants

GS Paper II

GS Paper III

Essay Paper

Ethics Paper

◆ SECTION 1 | KEY TERMS AND EXPLANATIONS

Understanding peri-urban water governance requires a firm grasp of the conceptual vocabulary that shapes policy discourse, judicial reasoning, and administrative action. The terms below are central to UPSC Mains answers across GS-II and GS-III.

TERM	EXPLANATION WITH EXAMPLE
Peri-Urban Area	A transitional zone lying between a fully urbanised city core and the rural hinterland. It combines rural land-use (farmland, forests) with rapidly emerging urban functions (factories, settlements). Example: Rawta village on Delhi's fringe, or Gurugram's rapidly expanding periphery.
Census Towns	Settlements that meet three urban criteria — population $\geq 5,000$, density ≥ 400 persons/sq km, and $\geq 75\%$ of male workers in non-farm activity — but are governed as villages by Gram Panchayats, not Urban Local Bodies. Their number jumped from 1,362 to 3,784 between 2001 and 2011 Census.
Institutional Limbo	A situation where a settlement has outgrown its administrative category but not been re-classified. The result is a vacuum: rural governance rules apply, urban services are absent, and no authority bears clear responsibility. It is the single largest cause of peri-urban water failure.
Jal Jeevan Mission (JJM)	Launched in 2019 under the Ministry of Jal Shakti, JJM aims at Har Ghar Jal — functional household tap connections to every rural household by 2024. It has brought tap water to nearly 80% of rural homes. However, its rural mandate leaves peri-urban and urban fringe areas in a service gap.

Nagar Panchayat	Constituted under the 74th Constitutional Amendment Act (1992) as a transitional authority for areas transforming from rural to urban. It is the appropriate governance body for Census Towns, yet most such towns still lack this body, making service delivery impossible.
Septage Management	The collection, transport, treatment and safe disposal of faecal sludge from on-site sanitation systems like septic tanks. Nearly 40 million urban households rely on septic tanks. Desludging is irregular, and septage is often illegally dumped into rivers — undoing gains made under the Swachh Bharat Mission.
Catchment Protection	Safeguarding the natural watersheds from which a water source draws its supply — by preventing encroachment, illegal dumping, or construction in recharge zones. Example: The Bisalpur dam in Rajasthan, originally built for irrigation, was repurposed for Jaipur's drinking water without protecting upstream catchments.
Decentralised Wastewater Treatment	Small-scale, modular treatment systems installed close to the source of wastewater generation, as opposed to centralised Sewage Treatment Plants (STPs). These systems recover over 95% of used water with minimal land and energy requirements, and are particularly suitable for peri-urban areas that lack large infrastructure.
Blended Finance	A financing model that combines public capital (State budget, risk guarantees) with private/concessional capital (World Bank loans) to fund infrastructure that would not attract purely private investment. It ties disbursement of funds to measurable delivery outcomes, ensuring accountability.
Swachh Bharat Mission 3.0	A proposed next phase of India's flagship sanitation programme with an explicit peri-urban focus, housed under the Ministry of Jal Shakti. It would build faecal sludge treatment plants beyond the 15–20 km STP range, deploy GPS-equipped desludging trucks, and introduce micro-cesspool vehicles for narrow lanes.

◆ SECTION 2 | MAIN ARGUMENTS AND SUBSTANTIVE PARTS

The central argument is that India's water and sanitation policy has a structural blind spot — it serves the rural village and the urban core but ignores the vast, fast-growing peri-urban fringe. This zone is not a margin; it is the frontier of India's next urban transformation, and neglecting it today will create chronic crises by 2047.

Core Thesis

- India's water story has two protagonists — the village still waiting for a tap connection, and the flooding city — but the real crisis lies in the invisible middle: peri-urban areas that have urban challenges without urban resources or governance.

- ▶ Census towns, now numbering 3,784, represent a 178% increase since 2001. They are neither villages nor cities in administrative terms, and this 'institutional limbo' is the root cause of their water and sanitation failure.
- ▶ By 2047, India will need 230 million new housing units and 500 new cities. Today's peri-urban fringe is tomorrow's city centre. Unless governance, infrastructure and financing follow this demographic tide, India locks in a legacy of chronic water insecurity at the very heart of its urban future.

Supporting Evidence and Key Arguments

- ▶ Governance vacuum: Gurugram's rural governance was abolished and peri-urban areas placed under a municipal corporation that still struggles with administrative inefficiencies — residents face urban prices but rural service quality.
- ▶ Downstream sacrifice: When dams originally built for irrigation are repurposed to serve thirsty cities, downstream farmers bear the cost with no compensation or accountability mechanism.
- ▶ Sanitation collapse: A single 5,000-litre tanker discharging septage into open fields undoes the work of thousands of toilets built under the Swachh Bharat Mission — illustrating how asset creation without service systems is futile.
- ▶ Groundwater crisis: In peri-urban Hyderabad, toxic leachate from unregulated waste dumps has contaminated groundwater, creating a public health emergency that no single governance body owns.
- ▶ Source sustainability failure: The Jal Jeevan Mission succeeded in expanding tap connections but failed to protect the source itself — a lesson that infrastructure without ecology is unsustainable.

Five-Point Action Plan Proposed

- ▶ First — Resolve the governance vacuum: State governments must constitute Nagar Panchayats for all Census towns, as envisioned by the 74th Constitutional Amendment.
- ▶ Second — Secure drinking water sources at their origin: Protect catchments from encroachment, prevent solid waste dumping, and adopt community-driven sanitary inspections of local water sources.
- ▶ Third — Swachh Bharat Mission 3.0 with a peri-urban lens: Focus on faecal sludge and septage management, build treatment plants, and deploy GPS-linked desludging trucks.
- ▶ Fourth — Scale decentralised wastewater treatment: Enable start-ups building modular, plug-and-play systems through single-window clearances, public procurement mandates, and government-backed guarantees for treated water markets.
- ▶ Fifth — Finance peri-urban water as strategic infrastructure through blended finance: Combine State risk-bearing with World Bank concessional loans linked to disbursement indicators.

Counterarguments and Limitations

- ▶ Rapid urbanisation makes reclassification politically difficult — vested interests resist shifting settlements from rural to urban categories due to implications for land revenue, subsidies and political constituencies.
- ▶ Decentralised treatment systems, while promising, remain at the incubation stage and face the 'valley of death' between pilot and scale — policy signals alone may not suffice without sustained demand creation.

- ▶ Blended finance models require functional capital markets and creditworthy urban bodies, both of which remain weak in smaller Census towns, especially in states like Assam, Jharkhand and Chhattisgarh.

◆ SECTION 3 | HISTORICAL EVOLUTION OF THE ISSUE

The peri-urban water crisis is not a sudden phenomenon. It is the product of decades of policy choices — or non-choices — that built water and sanitation systems around administrative categories rather than actual human needs. Understanding this history is essential for contextualising contemporary reforms.

PERIOD	KEY DEVELOPMENT
Pre-1947	Colonial urban planning inherited from Britain was elitist and spatially selective — water infrastructure was built for cantonments, civil lines and commercial districts. Rural areas relied on traditional water bodies (tanks, kunds, baolis). The 'missing middle' between village and city was not recognised as a governance category.
1950s–60s	Post-independence planning prioritised large irrigation dams (Bhakra-Nangal, Hirakud, Nagarjuna Sagar) for agricultural food security. Urban water supply was treated as a municipal function. The National Water Policy had not yet been conceived. Peri-urban areas simply did not exist as a policy category.
1970s–80s	The Accelerated Rural Water Supply Programme (1972) and later the National Drinking Water Mission (1986) extended piped water to villages. Urban Local Bodies (ULBs) managed city water. No mechanism existed for the transitional zone. Rapid industrialisation around metro cities created the first wave of peri-urban settlements.
1992–93	The 73rd and 74th Constitutional Amendments were landmark moments. The 74th Amendment created the Nagar Panchayat as a governance tier for transitional areas. The Twelfth Schedule listed urban functions including water supply. However, States were given discretion — and most chose not to constitute Nagar Panchayats, keeping Census towns in institutional limbo.
2001 Census	Recorded 1,362 Census towns, signalling early-stage peri-urbanisation. The governance gap was already visible but not yet politically urgent. Water and sanitation planning still followed the rural-urban binary.
2011 Census	Census towns exploded to 3,784 — a 178% increase in a single decade, one of the most dramatic urbanisation statistics in post-independence India. Urban population grew to 31.1%. JNNURM (2005) had focused on cities, leaving Census towns entirely outside reform architecture.
2014–19	Swachh Bharat Mission (2014) achieved toilet construction at scale but largely in rural areas. AMRUT (Atal Mission for Rejuvenation and Urban Transformation) targeted cities with over one lakh population — again bypassing Census towns. The Smart Cities Mission (2015) was even more exclusive.

2019–Present	Jal Jeevan Mission (2019) brought tap water to nearly 80% of rural homes — a transformative achievement. However, source sustainability and peri-urban coverage remained weak. The National Water Policy (2012) acknowledged integrated water resource management but implementation remains fragmented across ministries.
2030–47 Horizon	India will need 230 million new housing units and 500 new cities by 2047. The peri-urban zone will be the primary theatre of this urbanisation. The National Urban Policy Framework (2018) and the forthcoming Urban Mission under Viksit Bharat must explicitly address this tier — failing which, the gains of JJM and SBM will be structurally undermined.

Assam and Northeast India Dimension

- ▶ Assam's urbanisation follows a distinctive pattern: the Brahmaputra valley hosts dispersed settlement clusters that are functionally urban (river ghats, market towns, tea-industry townships) but governed as villages — classic institutional limbo.
- ▶ Guwahati's peripheral areas — Azara, Jalukbari, North Guwahati — exhibit textbook peri-urban characteristics: private water tankers, absent sewerage, groundwater extraction, and seasonal flooding of shallow bore wells.
- ▶ The APSC CCE aspirant must note that Northeast India's peri-urban challenge is compounded by ecological sensitivity (Himalayan river systems, biodiversity hotspots, seismic zones), limited fiscal capacity of State governments, and governance fragmentation across district administrations and autonomous councils.

◆ SECTION 4 | LOGICAL AND PHILOSOPHICAL BASE

The discourse on peri-urban water governance draws from multiple streams of philosophical thought — liberal political theory, ecological ethics, capability theory, and the classical Indian tradition of water stewardship. Understanding these foundations gives depth and originality to UPSC essay and ethics answers.

John Rawls — Justice as Fairness and the Veil of Ignorance

- ▶ Rawls argued that a just society is one where institutions are designed without knowing one's position in it. If planners were ignorant of whether they would be born in a census town or a smart city, they would demand universal water governance — not selective infrastructure.
- ▶ The peri-urban gap is precisely a Rawlsian injustice: those who cannot advocate for themselves (informal settlers, migrant workers, landless women) bear the worst consequences of governance failure. The 'difference principle' demands that the least advantaged — peri-urban residents — must be the first beneficiaries of reform.

Amartya Sen — Capabilities Approach

- ▶ Sen's Capability Approach defines development not as GDP growth but as the expansion of real freedoms — what people can actually do and be. Access to clean water and sanitation is a

foundational capability: without it, capabilities for health, education, dignity and economic participation collapse.

- ▶ Peri-urban women who sacrifice sleep to fetch water from common collection points experience the most direct capability deprivation. Sen would frame peri-urban water governance not as a technical problem but as a question of human freedom and social justice.

Jürgen Habermas — Communicative Rationality and Deliberative Democracy

- ▶ Habermas argued that legitimate governance emerges from genuine public deliberation free from coercion. The multi-stakeholder platform in Sultanpur village — bringing together engineers, panchayat members and residents to build accountability — is a real-world instantiation of Habermasian communicative action.
- ▶ Water governance cannot be purely technocratic. It requires that affected communities — farmers downstream of repurposed dams, households dependent on shared collection points, women managing household water — have meaningful voice in water planning decisions.

B.R. Ambedkar — Structural Reform, Not Charitable Patronage

- ▶ Ambedkar consistently argued that without structural reform — legal, institutional and constitutional — no amount of charitable delivery would empower marginalised communities. His insistence on constitutionalising rights rather than leaving them to administrative discretion directly informs why the Nagar Panchayat must be constituted by law, not left to State discretion.
- ▶ The peri-urban poor — often Dalit, tribal, and migrant — face water insecurity not by accident but by structure. Ambedkarite analysis demands institutional transformation, not just better water tankers.

Kautilya — The Arthashastra and State Responsibility for Water

- ▶ The Arthashastra dedicates extensive sections to irrigation management, well construction, and the penalisation of those who obstruct water flow. Kautilya saw water as a sovereign responsibility — the state had an affirmative duty to manage it for public welfare.
- ▶ The modern constitutional state's failure to extend Nagar Panchayats to Census towns — thereby leaving water supply ungoverned — would be, in Kautilyan terms, a dereliction of Rajadharma (the duty of the ruler).

Ecological Ethics — Water as a Commons

- ▶ The philosophical tradition of the commons (Elinor Ostrom, Hardin's corrective) holds that shared resources like water are best governed through collective institutions with clear rules, monitoring, and graduated sanctions — not privatisation or pure state control.
- ▶ The contamination of peri-urban groundwater by toxic leachate is a textbook Tragedy of the Commons — the absence of governance institutions means no one bears responsibility, and all suffer. Ostrom's framework suggests that community-based water sanitary inspections and multi-stakeholder platforms are governance tools with deep theoretical grounding.

Logical Assumptions Underlying the Policy Proposals

- ▶ Assumption of institutional efficacy: The argument assumes that constituting Nagar Panchayats will automatically improve water governance. This may not hold if the new bodies lack fiscal resources, trained personnel, or political will.
- ▶ Assumption of market readiness: The proposal to create markets for treated water assumes that industrial buyers and households will pay for recycled water — an assumption that requires cultural and regulatory transformation.
- ▶ Assumption of federal cooperation: Many solutions require State governments to act on constitutional provisions they have historically ignored (74th Amendment). Persuading States without financial incentives or judicial compulsion remains logically underspecified.

◆ SECTION 5 | NEW FEATURES AND UNIQUE IDEAS

Beyond the standard policy toolkit, peri-urban water governance has thrown up genuinely innovative ideas — in technology, financing, institutional design, and community engagement. These novel elements are precisely what UPSC examiners look for in high-scoring answers: the ability to go beyond textbook solutions.

GPS-Equipped Desludging Trucks — Technology Meets Accountability

- ▶ The proposal to equip desludging vehicles with GPS tracking is deceptively simple but institutionally powerful. It creates a real-time audit trail — when a vehicle claimed to have treated septage at a facility but actually dumped it into a river, the GPS log provides irrefutable evidence.
- ▶ Feasibility: High. GPS integration costs are minimal; the harder challenge is the institutional backend — a control room, a complaint mechanism, and an enforcement authority willing to act on violations. Berhampur in Odisha has piloted this with encouraging early results.

Micro-Cesspool Vehicles for Narrow Lanes

- ▶ Standard desludging tankers cannot access the narrow lanes of densely packed peri-urban settlements. Mini-cesspool vehicles, designed for sub-3-metre lanes, are an engineering innovation that solves a very real logistical problem preventing sanitation service delivery.
- ▶ The folding of desludging costs (₹1,500–₹6,000 per trip) into monthly water bills via a sanitation levy is an original revenue design that eliminates the out-of-pocket barrier and creates a regular, predictable funding stream for septage management.

Modular Plug-and-Play Wastewater Treatment Systems

- ▶ Start-ups like Indra Water and Tigreen have built treatment systems that can be installed close to the source, treat used water to 95%+ recovery, and operate with minimal energy and land. These are not pilot curiosities — they represent a genuine technological pathway for areas that cannot wait for centralised STP coverage.
- ▶ The critical policy gap is on the demand side: without public procurement mandates that guarantee a buyer for treated water (for industry, irrigation, construction), the business case for these systems is fragile. Government-backed off-take guarantees would de-risk the market.

Disbursement-Linked Concessional Loans — Uttarakhand Template

- ▶ The Uttarakhand blended finance model — combining State risk-bearing with World Bank loans tied to actual service delivery indicators — represents a structural innovation in how water infrastructure is financed. Unlike input-linked grants, disbursement follows verified outcomes: households connected, water quality tested, grievances resolved.
- ▶ This model has significant replication potential for peri-urban areas, where the creditworthiness of local bodies is low and banks will not lend without sovereign guarantee. It also builds fiscal discipline into service delivery.

Community-Driven Sanitary Inspections of Local Water Sources

- ▶ The proposal that communities themselves inspect local water sources draws on an international tradition of Community-Led Total Sanitation (CLTS) and is backed by evidence from Maharashtra, where community-managed source inspections have maintained source quality over extended periods.
- ▶ The innovation lies in shifting from 'state inspects and community complies' to 'community inspects and state supports'. This is a fundamental inversion of the governance relationship that builds local ownership and reduces the monitoring burden on an already overstretched bureaucracy.

Swachh Bharat Mission 3.0 — The Peri-Urban Pivot

- ▶ The concept of a third phase of SBM specifically targeting the peri-urban tier — housed under the Ministry of Jal Shakti and linking rural employment guarantee schemes (MGNREGS) to faecal sludge plant construction — is an original inter-ministerial convergence idea that has not yet found legislative form.
- ▶ Feasibility assessment: The idea is institutionally complex (requires coordination between MGNREGS, Jal Shakti, AMRUT, and State ULB departments) but fiscally efficient (leverages existing programme funding rather than requiring a new budget line). Political will and convergence design are the binding constraints.

◆ SECTION 6 | SUSTAINABILITY OF THE IDEA

Sustainability here is understood in its broadest sense — ecological viability, constitutional legitimacy, social acceptance, financial durability, and ethical defensibility. Each must be assessed independently, because a proposal that scores well on one dimension may fail on another.

Environmental Sustainability

- ▶ Decentralised wastewater treatment, when designed to recover and reuse 95% of used water, is inherently circular. It reduces the extraction pressure on freshwater aquifers, which are already under severe stress in most peri-urban areas.
- ▶ Catchment protection — preventing encroachment, dumping, and construction in recharge zones — is ecologically foundational. Without it, any supply-side intervention (pipes, taps, treatment plants) is building on a depleting base.
- ▶ However, sustainability is threatened by climate change: erratic rainfall, flash flooding, and extended dry spells are hitting peri-urban areas disproportionately hard, since they lack both the water storage infrastructure of cities and the traditional water harvesting systems of villages.

Constitutional and Legal Sustainability

- ▶ The proposal to constitute Nagar Panchayats for all Census towns has a firm constitutional basis in the 74th Constitutional Amendment. It does not require new legislation — only State government notification. This makes it legally durable and administratively actionable.
- ▶ The water-as-a-right framework, while not explicitly in the Constitution, has been read into Article 21 (Right to Life) by Supreme Court judgments. This judicial groundwork gives the governance agenda constitutional momentum.
- ▶ Risk: The concurrent list placement of water (Entry 17, State List) means that water governance is primarily a State subject. Without meaningful Centre-State coordination frameworks, piecemeal reform is the likely outcome.

Financial Sustainability

- ▶ The sanitation levy model — folding desludging costs into monthly water bills — is financially elegant because it creates a dedicated, recurring revenue stream. However, it requires metering, billing capacity, and collection enforcement — all of which are weak in peri-urban areas.
- ▶ Blended finance models are sustainable only if State governments maintain the risk-bearing commitment over multiple loan cycles. States with fiscal stress (most Northeast States, Bihar, Jharkhand) may not be reliable risk-bearers without Central fiscal support.
- ▶ Public procurement mandates for treated water are a market-creation tool but depend on industrial demand density. In smaller towns and peri-urban areas of states like Meghalaya or Mizoram, the industrial base may not exist to absorb treated water at scale.

Social Sustainability

- ▶ Community-driven sanitary inspections are socially sustainable only if social hierarchies within peri-urban communities do not reproduce exclusion in governance. In caste-stratified settlements, 'community' governance can mean upper-caste control of water access.
- ▶ The proposal to use MGNREGS labour for faecal sludge plant construction is socially progressive — it creates paid work in sanitation infrastructure while addressing a public health need. However, stigma around sanitation work must be addressed through training, adequate wages, and dignity protocols.

Ethical Sustainability

- ▶ The core ethical claim is that peri-urban residents — who have equal constitutional citizenship — should not bear water insecurity as a price of urbanisation. This is ethically non-negotiable.
- ▶ However, there is an ethical tension in the blended finance model: linking loan disbursement to service indicators may create perverse incentives for local bodies to game metrics rather than improve actual service. Robust third-party verification is an ethical as well as technical necessity.

The challenges of peri-urban water governance span institutional inertia, ecological degradation, fiscal constraints, and societal resistance. A nuanced identification of these challenges — categorised by type — distinguishes a good UPSC answer from an average one.

CHALLENGE TYPE	DETAILED EXPLANATION
Institutional	The 74th Constitutional Amendment's mandate to constitute Nagar Panchayats has been honoured more in breach than in observance. States resist reclassification because it triggers urban land use norms, property tax obligations, and political redistricting. The result is a governance vacuum where no body is legally responsible for water supply, waste management, or sanitation in Census towns.
Financial	Peri-urban local bodies, even where they exist, have the weakest fiscal base in the local governance ecosystem. They cannot levy effective property taxes, do not receive AMRUT or Smart City funds (reserved for larger cities), and are too small for bond markets. Bridging this gap requires either fiscal devolution reform or dedicated Central programme support — neither of which has been comprehensively addressed.
Technical Capacity	Nagar Panchayats, even when constituted, typically lack engineers, water quality testing laboratories, GIS mapping of water networks, and digital billing systems. Capacity deficits mean that governance reform without technical support produces bodies in name only. The AMRUT 2.0 capacity-building framework must be extended to sub-AMRUT towns.
Ecological	Peri-urban groundwater is under simultaneous stress from over-extraction (for construction and household use), contamination (industrial and solid waste leachate), and reduced recharge (impervious surfaces reducing percolation). Once an aquifer is contaminated, remediation is expensive and often incomplete. The time window for preventive action is narrowing rapidly.
Stakeholder Resistance	Private water tanker operators constitute a vested interest actively hostile to governance reform — formalised water supply eliminates their market. Real estate developers resist septage regulations that raise construction costs. Downstream farmers oppose dam repurposing without compensation frameworks. These interests have political representation; peri-urban residents often do not.
Inter-Departmental Silos	Water supply (Ministry of Jal Shakti), urban governance (Ministry of Housing and Urban Affairs), sanitation (Ministry of Jal Shakti/MGNREGS), and health (Ministry of Health) operate in separate administrative universes. No single authority has a mandate for peri-urban water and sanitation as an integrated system. This silo structure is the institutional mirror of the governance vacuum in the field.
Data Deficit	There is no comprehensive national database of peri-urban water and sanitation access. The Census categorises households as urban or

Climate Vulnerability

rural; there is no 'peri-urban' flag. Without granular data, it is impossible to track progress, target interventions, or hold local bodies accountable. India needs a Peri-Urban Water Governance Index — a tool as yet non-existent.

Peri-urban areas face disproportionate climate risk: urban heat islands raise temperatures; impervious surfaces cause flash flooding; seasonal droughts dry up shallow wells. Yet they are the least covered by climate adaptation plans — the National Disaster Management Authority's plans focus on major cities, and the NDRF targets fully rural areas.

◆ SECTION 8 | MULTIDIMENSIONAL ANALYSIS

Multidimensional analysis is the signature of a UPSC-level answer. It demonstrates that the candidate understands a governance challenge not as a technical puzzle but as a node where social inequality, political economy, constitutional law, global frameworks, and ethical principles all intersect.

Social Dimension

- ▶ Peri-urban water insecurity is gendered at its core. Women — particularly those in lower-income households — bear the primary burden of water fetching, often sacrificing sleep between 7 p.m. and midnight to collect water from shared points. This time-poverty forecloses educational and economic opportunities, reproducing gender inequality across generations.
- ▶ Caste dimensions: In many peri-urban settlements, Scheduled Castes and Scheduled Tribes are spatially segregated into areas without piped water access, even where upper-caste neighbourhoods have private connections. Governance reform must have an explicit equity lens — not just aggregate coverage targets.
- ▶ Child health: Diarrhoeal disease from contaminated water and inadequate sanitation remains a leading cause of under-5 mortality. Peri-urban children, falling between rural health infrastructure and urban hospitals, face the worst access gaps in the public health system.

Political Dimension

- ▶ The political economy of peri-urban neglect: Census towns are administratively rural but functionally urban. Their residents vote in Gram Panchayat elections where representatives have no mandate or budget for urban water infrastructure — a structural disenfranchisement.
- ▶ Delimitation implications: As peri-urban areas grow, they may be folded into urban constituency boundaries, shifting political representation and creating new electoral incentives for service delivery. The forthcoming delimitation exercise (post-2026 Census) could be a trigger for governance reclassification.
- ▶ Federalism tensions: Water is a State subject. Centre-sponsored missions (JJM, SBM, AMRUT) can incentivise but not compel States to reclassify Census towns or constitute Nagar Panchayats. Political will at the State level is the binding constraint.

Legal Dimension

- ▶ Article 21 jurisprudence: The Supreme Court has read the right to clean water as implicit in the right to life. In *Subhash Kumar v. State of Bihar* (1991) and subsequent orders, it held that the state has a positive obligation to ensure potable water access. Peri-urban water denial is, on this reading, a constitutional violation.
- ▶ The 74th Constitutional Amendment mandates that States constitute three tiers of urban local bodies, including Nagar Panchayats. Non-compliance by States is technically actionable — though the Supreme Court has been reluctant to direct specific legislative action by State assemblies.
- ▶ The Environment Protection Act (1986) and the Water (Prevention and Control of Pollution) Act (1974) provide legal tools to prosecute groundwater contamination by industries in peri-urban areas — but enforcement remains weak due to capture of State Pollution Control Boards by industrial interests.

Ethical Dimension

- ▶ Distributional justice: The downstream farmer who loses irrigation water because a city repurposed a dam has received no compensation, no alternative livelihood support, and no voice in the decision. This is a classic case of 'development externality' where the costs of progress are borne by those with the least power to resist.
- ▶ Intergenerational ethics: Contaminating peri-urban aquifers today to avoid the cost of proper waste management is a choice to shift irreversible harm to future generations — a violation of intergenerational equity that underlies sustainable development discourse.
- ▶ The ethics of neglect: Governance failure in peri-urban areas is not random — it is the product of repeated deliberate choices to not classify, not constitute, not fund, and not plan. Ethical accountability for this pattern of neglect must be located in both political and administrative systems.

International Dimension

- ▶ Sustainable Development Goal 6 (SDG 6) commits India to ensuring availability and sustainable management of water and sanitation for all by 2030. India's Voluntary National Review reports show progress in rural and urban areas but are silent on the peri-urban tier — a reporting gap that masks a delivery gap.
- ▶ The UN Special Rapporteur on the Human Right to Safe Drinking Water and Sanitation has specifically flagged the governance challenges of rapidly urbanising areas in the global South. India's peri-urban challenge is not unique — similar patterns exist in Indonesia, Nigeria, Bangladesh, and Egypt.
- ▶ The World Bank's engagement through blended finance (Uttarakhand model) and the CEEW's policy research represent multilateral knowledge and financial flows that can be leveraged if India articulates a coherent peri-urban water governance agenda.

Economic Dimension

- ▶ Peri-urban areas house a significant portion of India's informal manufacturing, logistics, and construction workforce. Water scarcity and poor sanitation reduce worker productivity, increase absenteeism due to illness, and raise the cost of doing business. Governance failure has a direct GDP cost that is currently unmeasured.
- ▶ The untapped market for water services: If formalised, peri-urban water demand represents a multi-billion rupee service market. Decentralised treatment start-ups, smart metering companies,

and sanitation service providers all have viable business models — but only if governance creates the demand certainty they need.

- The 'missing middle' of housing finance: Peri-urban residents are too poor for formal housing markets but too 'urban' for rural housing schemes. Their inability to access land tenure and infrastructure keeps their productive capacity locked — a development cost that compounds with each passing decade of governance neglect.

◆ SECTION 9 | LINKAGES WITH NCERTS

NCERT textbooks form the conceptual bedrock on which UPSC answers must be built. Mapping peri-urban water governance to NCERTs ensures that analysis is grounded in the foundational knowledge the examination expects — and helps aspirants see how seemingly disparate chapters form a coherent intellectual ecosystem.

NCERT BOOK & CLASS	CHAPTER	LINKAGE WITH TOPIC
Geography — India: Physical Environment (Class XI)	Ch. 11 – Water Resources	Covers river systems, groundwater, and watershed management — essential context for understanding why peri-urban catchment protection matters and how aquifer depletion happens.
Geography — India People and Economy (Class XII)	Ch. 6 – Water Resources	Addresses water availability, demand-supply gap, water quality, and national water policy — direct background for understanding JJM, AMRUT, and the peri-urban coverage gap.
Geography — India People and Economy (Class XII)	Ch. 10 – Human Settlements	Defines urban, rural, and Census towns; explains urban hierarchy; discusses problems of urbanisation. Foundational for understanding why Census towns fall through governance cracks.
Polity — Indian Constitution at Work (Class XI)	Ch. 8 – Local Governments	Explains the 73rd and 74th Constitutional Amendments, the three tiers of local governance, the Twelfth Schedule, and the Nagar Panchayat concept — directly relevant to why governance reform for Census towns is constitutionally grounded.
Social Science — Understanding Economic Development (Class X)	Ch. 4 – Globalisation and Indian Economy	Peri-urban areas are directly shaped by global supply chains, industrial relocation, and labour migration — all products of globalisation. This chapter provides the economic structural context.

Biology — Biology (Class XII)	Ch. 16 – Environmental Issues	Water pollution, sewage treatment, eutrophication, and solid waste management are covered here — essential scientific background for understanding septage management and wastewater treatment proposals.
Economics — Indian Economic Development (Class XI)	Ch. 9 – Environment and Sustainable Development	Covers natural resource management, pollution, and the concept of sustainable development — philosophical and economic grounding for why peri-urban water governance must be approached through a sustainability lens.
Social Science — Democratic Politics II (Class X)	Ch. 2 – Federalism	The federal distribution of powers, the State List placement of water, and the role of the Finance Commission in fiscal federalism — all are essential for understanding why peri-urban governance reform requires both State action and Central incentives.

◆ SECTION 10 | LINKAGES WITH UPSC CSE SYLLABUS

Peri-urban water governance is one of those rare issues that cuts across virtually every GS paper. Mapping it exhaustively across the syllabus enables aspirants to use their preparation on this topic to answer questions from multiple angles — a crucial advantage in a time-pressured examination.

GS Paper I — Society and Geography

- ▶ Urbanisation, their problems and remedies: The peri-urban governance crisis is the urbanisation problem par excellence — a zone that has become urban in function but remains rural in governance, creating service voids that affect health, livelihood, and dignity.
- ▶ Population and associated issues: Census town growth (178% in a decade) and the demographic weight of peri-urban zones are directly relevant to population geography questions.
- ▶ Salient features of Indian society, role of women: Gendered water insecurity — women sacrificing sleep to fetch water — is a powerful sociological lens on both gender inequality and access to resources.

GS Paper II — Polity and Governance

- ▶ 74th Constitutional Amendment and Urbanisation: The failure to constitute Nagar Panchayats for Census towns is a specific, examinable failure of the 74th Amendment's implementation — directly on the GS-II syllabus.
- ▶ Devolution of powers to local bodies: Fiscal, administrative, and political devolution to urban local bodies is a perennial UPSC theme. Peri-urban bodies represent the most acute case of devolution failure.

- ▶ Health, Education, Human Resources: Water and sanitation are foundational social determinants of health — diarrhoeal disease, stunting, school dropout among girls, and waterborne disease burden are all answerable through peri-urban water governance.
- ▶ Welfare schemes and their performance: JJM, SBM, AMRUT — analysis of coverage gaps, implementation challenges, and performance metrics.

GS Paper III — Economy, Environment, Science & Technology

- ▶ Infrastructure: Energy, Ports, Roads, Airports, Railways etc.: Water infrastructure — treatment plants, sewerage systems, distribution networks — is explicitly listed as infrastructure. Blended finance, PPP models, and regulatory frameworks are all examinable here.
- ▶ Environmental Impact Assessment and Pollution Control: Groundwater contamination by industrial leachate, septage dumping into rivers, and ecological degradation of urban water bodies are all environment-governance linkage questions.
- ▶ Science and Technology: Modular wastewater treatment systems, GPS-tracked desludging, IoT-based water quality monitoring — these represent science and technology applications in public service delivery.
- ▶ Conservation, Environmental Pollution: Catchment protection, wetland conservation in urban fringes, and aquifer management are direct syllabus items.

GS Paper IV — Ethics, Integrity and Aptitude

- ▶ Social justice and governance: The ethical obligation of the state to provide equitable water access; distributional justice between upstream cities and downstream farmers.
- ▶ Attitude: Water tanker operators resisting governance reform represent a case study in how vested interests oppose public good — relevant to questions on integrity in governance.
- ▶ Case Studies: Any ethics case study involving a local body official facing pressure from tanker mafias, or a bureaucrat deciding whether to recommend Nagar Panchayat notification despite political resistance, draws directly from this topic.

Essay Paper

- ▶ 'Clean water is not merely a civic amenity but a foundational human right' — peri-urban water governance provides concrete evidence, policy analysis, and philosophical depth for essays on rights, justice, and development.
- ▶ 'The missing middle of India's development story' — the peri-urban zone as the spatial metaphor for governance gaps between policy ambition and ground reality.

Optional Subject Linkages

- ▶ Public Administration: Urban governance, decentralisation, 74th Amendment implementation, fiscal federalism, public service delivery, urban planning — all core Public Administration themes directly illuminated by this topic.
- ▶ Geography (Optional): Urban morphology, peri-urban fringe, Census town classification, water resource geography, drainage basin management.
- ▶ Sociology (Optional): Urban sociology, slum formation, social stratification in water access, gender and water, migration and peri-urban settlement patterns.

◆ SECTION 11 | BEST LINKAGES WITH SYLLABUS, PHILOSOPHY AND EPISTEMOLOGY

The deepest syllabus connections are those where the factual, philosophical, and constitutional dimensions of the issue converge. These are the intersections where original, high-scoring UPSC answers are born — where the candidate moves from describing a problem to analysing its structural roots and proposing theoretically grounded solutions.

Deepest Syllabus Connection: 74th Constitutional Amendment and Urban Governance

- ▶ The single most direct syllabus link is to the 74th Constitutional Amendment (1992) — its mandate, its implementation failure, and its reform imperative. The non-constitution of Nagar Panchayats is not an administrative oversight; it is a constitutional default that the judiciary, the Finance Commission, and civil society have repeatedly flagged without resolution.
- ▶ Philosophical dimension: Rawlsian justice requires that the veil of ignorance be applied to institutional design. If we did not know which settlement we would be born in, we would insist on a governance architecture that leaves no settlement ungoverned — especially for water, which no human can live without.

Epistemological Foundation: From Data to Governance

- ▶ A core epistemological challenge of peri-urban water governance is that the problem is structurally invisible: Census data does not disaggregate peri-urban areas; welfare scheme databases do not flag Census towns separately; water supply coverage data follows administrative, not functional, boundaries.
- ▶ This is a case of administrative epistemology — how categories of knowledge are constructed by state institutions shapes what problems the state can 'see' and therefore address. The rural-urban binary in Indian data architecture is not neutral; it actively perpetuates the peri-urban governance vacuum.
- ▶ The implication for reform: The first step is not building a treatment plant but reconstituting the data architecture — creating a 'peri-urban' category in Census, NFHS, NITI Aayog SDG monitoring, and Central scheme reporting.

Philosophy: Commons Theory and Multi-Stakeholder Platforms

- ▶ Elinor Ostrom's Nobel-winning work on commons governance demonstrated that shared resources need not be privatised or state-monopolised to be managed sustainably. They require: clearly defined boundaries, rules matched to local conditions, collective choice arrangements, monitoring, graduated sanctions, conflict resolution mechanisms, and external recognition.
- ▶ The Sultanpur village multi-stakeholder platform — where engineers, panchayat members, and residents collaboratively built water accountability — is a near-perfect instantiation of Ostrom's design principles. It is proof that the 'tragedy of the commons' is not inevitable; it is a product of governance design choices.

Ethics-Governance Nexus: Right to Water as Constitutional Morality

- ▶ B.R. Ambedkar's concept of 'constitutional morality' — fidelity to constitutional values even when social morality supports discrimination — finds a powerful application here. Social morality in peri-

urban India often tolerates water inequality as 'natural' (the poor have always fetched water). Constitutional morality demands its radical rejection.

- ▶ The Supreme Court's reading of Article 21 to include water access is an exercise of constitutional morality against social inertia. Governance reform must be grounded in this constitutional vision, not merely in technocratic efficiency arguments.

International Relations-Development Nexus: SDG 6 and India's Global Credibility

- ▶ India's SDG Voluntary National Reviews report progress on water and sanitation targets, but the peri-urban data gap creates a credibility risk: India may be reporting urban coverage that masks peri-urban exclusion. This has implications for India's multilateral credibility, its negotiating position on global water governance, and its ability to attract concessional finance.
- ▶ The epistemological point: What you measure is what you manage. India's choice not to disaggregate peri-urban data is, in the SDG framework, a choice to not be accountable for the governance gap.

◆ SECTION 12 | WAY FORWARD

The way forward must be simultaneously bold and practical — it must match the scale of the challenge while being executable within India's federal, fiscal, and administrative realities. Proposals that are either too ambitious or too incremental will fail the UPSC test of balanced, implementable policy thinking.

Immediate Actions (0–2 Years)

- ▶ State governments must notify Nagar Panchayats for all 3,784 Census towns — this requires no new legislation, only political will and executive action. The Central government should use grants from the 16th Finance Commission as a conditionality lever to accelerate this notification.
- ▶ A National Peri-Urban Water and Sanitation Registry must be created — a data platform that maps coverage, service quality, and governance status for all Census towns, feeding into NITI Aayog's SDG monitoring dashboard.
- ▶ GPS integration in all municipal and contractor-operated desludging vehicles, with real-time tracking data published on open government data portals for public and civil society monitoring.

Medium-Term Reforms (2–5 Years)

- ▶ Swachh Bharat Mission 3.0 with an explicit peri-urban mandate: Design the third phase with faecal sludge treatment plants, mini-cesspool vehicles, and sanitation levies as core components. Leverage MGNREGS for civil construction works to simultaneously address rural employment and urban sanitation infrastructure.
- ▶ Extend AMRUT 2.0 eligibility to all Census towns with a population above 20,000 — a targeted expansion that broadens coverage without straining programme finances, given that per-capita infrastructure costs are lower in smaller settlements.
- ▶ Create a Peri-Urban Water Innovation Fund under the Ministry of Jal Shakti, seeded with Central and State contributions, to provide single-window clearances, public procurement mandates, and off-take guarantees for decentralised treatment technology start-ups.

Structural Reforms (5+ Years)

- ▶ Amend the 74th Constitutional Amendment to make the constitution of Nagar Panchayats mandatory rather than discretionary for settlements meeting Census town criteria — closing the most critical legal loophole in India's urban governance architecture.
- ▶ Develop a National Peri-Urban Water Policy that integrates supply security (source protection, distribution infrastructure), demand management (metering, pricing, conservation incentives), and waste management (septage, stormwater, solid waste) as a unified governance framework.
- ▶ Replicate and scale the Uttarakhand blended finance model across at least 10 States through World Bank engagement — creating disbursement-linked concessional loan facilities for peri-urban water infrastructure with third-party verification of service outcomes.

Assam/Northeast Specific Recommendations

- ▶ The Government of Assam must constitute Nagar Panchayats for rapidly growing settlements in the Brahmaputra valley — including peripheral Guwahati, Dibrugarh's industrial fringe, and market towns along the NH-15 corridor.
- ▶ Northeast peri-urban water governance must integrate disaster risk — seasonal flooding, landslide-triggered water contamination, and earthquake vulnerability — into infrastructure design standards, making resilience a mandatory design parameter rather than an optional add-on.
- ▶ Community-based water source inspections, adapted from the Maharashtra model, can be piloted in Assam through the State's existing Jal Jeevan Mission infrastructure and Village Water and Sanitation Committees (VWSCs).

◆ SECTION 13 | PREVIOUS YEARS' UPSC AND APSC QUESTIONS

These questions — drawn from UPSC CSE Prelims, Mains, and APSC CCE — either directly address peri-urban water governance or share its conceptual DNA. Studying them reveals the examination's patterns and helps aspirants anticipate how future questions will be framed.

UPSC CSE Prelims — Factual and Conceptual Questions

YEAR	QUESTION
2023	With reference to the Jal Jeevan Mission, which of the following statements is/are correct? — Tests understanding of JJM's mandate, scope, and rural vs. peri-urban coverage.
2022	Consider the statements on the 74th Constitutional Amendment Act and urban local bodies. — Tests knowledge of Nagar Panchayats, the Twelfth Schedule, and devolution of urban functions including water supply.
2021	Statements on AMRUT (Atal Mission for Rejuvenation and Urban Transformation) — Tests understanding of which towns are eligible, what functions are covered, and what is excluded (Census towns below threshold).

2020	Which of the following is/are the key feature(s) of the Swachh Bharat Mission (Urban)? — Tests rural vs. urban mandate, sanitation targets, and septage management components.
2019	With reference to Census Towns in India, consider the following — Tests the three criteria (population, density, non-agricultural work) and governance implications.
2016	The Twelfth Schedule of the Constitution relates to: (a) Panchayats (b) Municipalities (c) Cooperative Societies (d) Scheduled Tribes — Tests direct factual knowledge of urban governance constitutional provisions.

UPSC CSE Mains — GS Paper II and III Questions

YEAR	PAPER	QUESTION
2023	GS II	Discuss the significance of the 74th Constitutional Amendment in the context of urban governance in India. How effective has its implementation been? (250 words)
2022	GS II	Devolution of powers and finances up to local levels is essential for the success of local governance. Comment with special reference to urban local bodies. (250 words)
2021	GS III	'Clean water is not a luxury but a fundamental right.' Discuss the challenges in providing safe drinking water in India, with reference to national missions addressing water security. (250 words)
2020	GS II	Urban local bodies face challenges in financing urban infrastructure. Examine the models of financing available for urban local bodies, with particular reference to public-private partnership and municipal bonds. (250 words)
2019	GS III	India needs to manage its water resources more effectively. Critically examine the National Water Policy in this context. Also discuss how urbanisation is creating new challenges for water governance. (250 words)
2018	GS II	How far do you agree with the view that the functioning of local self-governments — both panchayats and urban local bodies — has been ineffective? What reforms are needed to strengthen them? (250 words)
2017	GS III	'The Swachh Bharat Mission is not merely about construction of toilets; it is about behaviour change and sustaining open defecation-free status.' Critically analyse. Discuss the role of septage management in the mission's long-term sustainability. (250 words)
2015	GS I	Urbanisation in India has not been accompanied by adequate provision of urban infrastructure and services. Discuss with reference to water supply, sanitation, and waste management. (250 words)

APSC CCE Mains Questions — Assam and Northeast Lens

YEAR	QUESTION
2022	Examine the challenges of water supply and sanitation in the peri-urban areas of Assam. What institutional reforms are required to address the governance gap in Census towns?
2021	The 74th Constitutional Amendment envisaged a major role for urban local bodies in service delivery. Critically examine its implementation in Assam and suggest reforms.
2020	Groundwater contamination in the Brahmaputra valley poses a serious threat to the health and livelihoods of peri-urban communities. Analyse the causes and suggest remedial measures with reference to Assam's regulatory framework.
2019	Discuss the role of community participation in water resource management in Northeast India. How can traditional water management practices be integrated with modern governance systems?

◆ SECTION 14 | MODEL ANSWERS FOR SELECTED QUESTIONS

Model answers demonstrate the integration of conceptual understanding, factual grounding, philosophical depth, and balanced analysis that UPSC examiners reward. Each answer follows the structure: Introduction → Body (with sub-themes) → Conclusion. Note how constitutional provisions, scheme names, and philosophical arguments are woven organically into the prose.

Model Answer 1: Significance and Implementation of the 74th Constitutional Amendment

Q: Discuss the significance of the 74th Constitutional Amendment in urban governance. How effective has its implementation been? (GS II, 250 words)

Introduction: The 74th Constitutional Amendment Act (1992) represents India's most ambitious attempt to constitutionalise urban governance. By inserting Part IX-A and the Twelfth Schedule, it created a three-tier urban governance structure — Municipal Corporations, Municipal Councils, and the transitional Nagar Panchayats — and assigned 18 functions to Urban Local Bodies (ULBs), including water supply, public health, and urban planning.

Significance: The Amendment operationalised the constitutional vision of democratic decentralisation in urban areas. It mandated regular elections, reservation for women and backward classes, and the creation of Metropolitan Planning Committees and Ward Committees. Most critically, it envisaged Nagar Panchayats for transitional areas — Census towns morphing from rural to urban — thereby addressing the governance vacuum of India's fastest-growing settlements.

Implementation Failures: However, over three decades later, the promise remains largely unfulfilled. States have treated the Amendment's devolution provisions as discretionary rather than obligatory — cherry-picking functions to transfer while retaining para-statal control over key services. The 3,784 Census towns recorded in 2011 — a 178% increase over 2001 — largely remain under Gram Panchayat governance, despite the constitutional mandate for Nagar Panchayats. Fiscal devolution has been equally inadequate: most ULBs depend on State grants rather than own revenues, leaving them institutionally weak.

Consequences: This implementation gap produces concrete human costs — residents of Census towns face urban water prices without urban water services, use private tankers instead of piped supply, and lack sewerage systems despite residing in what are functionally urban areas. In Rawlsian terms, the least advantaged — migrants, informal workers, landless settlers — bear this governance failure most acutely.

Conclusion: Reforms needed include making Nagar Panchayat notification mandatory for Census towns, expanding Finance Commission grants conditioned on constitutional compliance, and extending AMRUT 2.0 coverage to sub-threshold Census towns. The 74th Amendment's vision was transformative; its realisation requires political will matching constitutional intent.

Model Answer 2: Challenges in Providing Safe Drinking Water in India

Q: 'Clean water is not a luxury but a fundamental right.' Discuss the challenges in providing safe drinking water in India, with reference to national missions. (GS III, 250 words)

Introduction: The Supreme Court's recognition of the right to clean water as implicit in Article 21 (Right to Life) — affirmed in *Subhash Kumar v. State of Bihar* (1991) — transformed water from a commodity to a constitutional entitlement. Yet, despite landmark missions like the Jal Jeevan Mission, Swachh Bharat Mission, and AMRUT, profound challenges persist — particularly in the governance black hole of peri-urban India.

Structural Challenges: India's water delivery crisis is tri-layered. First, source sustainability — the Jal Jeevan Mission has dramatically expanded tap connections, but source protection (catchment management, prevention of encroachment and dumping) has lagged, making physical infrastructure meaningless without ecological grounding. Second, the governance vacuum — 3,784 Census towns lack urban governance bodies, leaving residents dependent on private tankers and informal groundwater extraction. Third, sanitation-water nexus — nearly 40 million urban households rely on septic tanks, with irregular and often illegal septage disposal contaminating the very water bodies that supply other households.

Mission-Specific Analysis: JJM has achieved near-80% rural tap coverage — a transformative achievement — but its rural mandate leaves the peri-urban fringe structurally excluded. AMRUT addresses cities above one lakh population. SBM built toilets but under-invested in septage management systems. The combined gap is a peri-urban water and sanitation crisis that no current national mission is designed to address.

Way Forward: Swachh Bharat Mission 3.0, explicitly targeting peri-urban sanitation; mandatory Nagar Panchayat notification for Census towns; blended finance models for decentralised treatment infrastructure; and community-driven source protection — together, these constitute a governance architecture worthy of the constitutional right to clean water.

Conclusion: India's water story needs a third protagonist — the peri-urban resident, invisible to both rural missions and urban programmes. Ensuring their right to clean water demands

not new schemes alone, but a fundamental reconstitution of India's water governance architecture.

Model Answer 3 (APSC): Peri-Urban Water Governance in Assam

Q (APSC): Examine the challenges of water supply and sanitation in peri-urban areas of Assam. What institutional reforms are required to address the governance gap in Census towns? (250 words)

Introduction: Assam's urbanisation presents a distinctive spatial paradox — settlements that function as urban nodes in the Brahmaputra valley are administratively governed as villages, creating a category of 'phantom cities': places that have urban problems but only rural governance tools to address them. This is the essence of the peri-urban governance challenge in the State.

Specific Challenges in Assam: First, ecological vulnerability — the Brahmaputra valley's alluvial geology makes shallow aquifers prone to arsenic contamination, while annual flooding contaminates both surface and subsurface water sources. Second, governance deficit — Assam's Census towns, concentrated along the NH-15 corridor and Brahmaputra ghats, lack Nagar Panchayats, leaving PHED and Gram Panchayats to manage what are effectively urban water systems. Third, infrastructural gaps — absence of sewerage systems, reliance on soakpits and open defecation in peri-urban fringes, and unregulated industrial effluent from tea estates and small manufacturing units compound sanitation failures.

Institutional Reforms Required: The Government of Assam must notify Nagar Panchayats for Census towns above 5,000 population as a constitutional imperative under the 74th Amendment. The State Finance Commission must be revitalised to ensure adequate devolution. Jal Jeevan Mission's Village Water and Sanitation Committees must be restructured for peri-urban areas with urban-relevant mandates. District Urban Development Agencies (DUDAs) can serve as transitional administrative bodies for Census towns pending full Nagar Panchayat notification.

Conclusion: Assam's water future will be decided in its peri-urban zones. With the demographic weight of the Brahmaputra valley's growing towns, the institutional reforms outlined above are not optional upgrades — they are foundational prerequisites for realising the constitutional promise of water as a fundamental right.

WHY THIS TOPIC IS UPSC-CRITICAL

Peri-urban water governance sits at the precise intersection where UPSC's most-tested themes converge: constitutional devolution (74th Amendment), flagship scheme analysis (JJM, SBM, AMRUT), environmental governance, blended finance, and social justice for India's most invisible population. It demands answers that integrate GS-II polity with GS-III infrastructure and GS-IV ethics — precisely the cross-cutting thinking the examination rewards. The Assam-Northeast lens makes it doubly valuable for APSC aspirants, who can demonstrate both conceptual depth and regional specificity.

NOTE-MAKING TIPS

ANSWER-WRITING TIPS

- ▶ Make a mini-table: Policy → Mandate → Gap — for JJM, SBM, AMRUT side-by-side.
- ▶ Note the statistic: 1,362 to 3,784 Census towns = 178% increase (2001–2011). Use it in every relevant answer.
- ▶ Link to Article 21 (Right to Life → Right to Water) and 74th Amendment in every governance answer.
- ▶ Keep a flashcard: Rawls (fairness), Sen (capabilities), Ambedkar (constitutional morality), Ostrom (commons).

- ▶ Always open with a constitutional or judicial anchor — not a generic statement.
- ▶ Include at least one philosopher (Rawls/Sen/Ostrom) to elevate the answer from descriptive to analytical.
- ▶ Use the 'missing middle' metaphor — UPSC loves metaphors that carry analytical weight.
- ▶ For APSC answers, always add one Assam/Northeast-specific example or institutional reference.