Appendix: Actions required

No.	Action Required	Reason / Problem Being Addressed
1	Withdraw the proposed amendment reducing buffer zones and immediately stay its implementation pending expert review, maintaining status quo buffers as per RMP-2015 standards.	Shrinking buffers to 3-6 meters ignores their ecological roles (e.g., habitat for migratory birds, amphibians, and semi-aquatic fauna; pollution control by filtering sediments, nutrients, and toxins; flood mitigation as impoundment areas; groundwater recharge via percolation; erosion control through vegetated stabilization; climate regulation via carbon sequestration and micro-climate moderation; and public functions for education and recreation). This violates Article 21 (right to clean environment, as in *M.C. Mehta v. Union of India*, 1987), the Precautionary Principle (*Vellore Citizens' Welfare Forum v. Union of India*, 1996), and Wetlands Rules, 2017 (Rule 4 prohibits encroachments and Rule 7 requires a protected "zone of influence"), leading to biodiversity loss, flooding, and public health risks.
2	Revamp KTCDA with accountability mechanisms and clear separation of regulatory and execution functions.	Current conflict of interest (as regulator and executor) prevents effective governance, violating natural justice (*A.K. Kraipak v. Union of India*, 1969) and leading to inaction on encroachments and pollution.
3	Frame and notify Rules and Standard Operating Procedures (SOPs) under the KTCDA Act.	Over 11 years have passed without operational rules, resulting in unchecked encroachments, pollution, and failure to discharge statutory duties under Sections 5 and 12 of the Act.
4	Prepare and publish a comprehensive Lake & Drain Revival Plan.	Essential for systematic restoration, desilting, sewage diversion, and ecosystem revival, addressing KTCDA's failure to revive any lake despite its mandate, in line with sustainable development (*Vellore Citizens' Forum*, 1996).
5	Update and implement a city-wide Drainage Master Plan.	Outdated infrastructure cannot handle sewage and stormwater, leading to flooding, contamination, and violation of Integrated Water Resources Management (IWRM) under NEP, 2006 (para 5.2.7).
6	Mandate science-based, outcome-oriented buffer zones (larger than the proposed 3-6 meters).	Buffers are integral ecological infrastructure, not cosmetic setbacks; reducing them is arbitrary and disproportionate (*Om Kumar v. Union of India*, 2001), discriminatory against smaller lakes (which need larger buffers despite lower ecological capacity, per Article 14), and ignores non-application of mind to their functions (*E.P. Royappa v. State of Tamil Nadu*, 1974).
7	Ensure centralized basin-level governance of lakes, drains, and aquifers under a statutory authority.	Fragmentation under the ward-level Greater Bengaluru Authority (GBA) model is irrational and ecologically harmful, dismantling integrated management of hydrologically interconnected systems and violating the Public Trust Doctrine (*M.C. Mehta v. Kamal Nath*, 1997) and Article 21.

No.	Action Required	Reason / Problem Being Addressed
8	Stop encroachments and construction within lake beds and buffer zones; strictly enforce Wetlands Rules, 2017.	Encroachment and illegal construction (including pipelines by government agencies) are primary causes of ecosystem collapse, prohibited under Rule 4 (e.g., reclamation, waste dumping, untreated sewage discharge); State Wetlands Authority (SWAK) inaction amounts to abdication of duties (*M.K. Balakrishnan v. Union of India*, 2017).
9	Constitute an Expert Committee under Order XXVI of the Code of Civil Procedure (for expert inquiry) to draft scientifically justified buffer regulations, with public participation.	Regulations must be science-based, not arbitrary; public trust doctrine requires transparency and consultation (*Lafarge Umiam Mining v. Union of India*, 2011). At minimum, include independent experts in: limnology (lake ecology and trophic dynamics), hydrology (surface water flows, stormwater modeling), hydrogeology (aquifer recharge and subsurface flows), wetland ecology, ornithology/biodiversity, urban ecology and planning, public health (disease vectors, pollution impacts), environmental engineering (sewage and nutrient management), and community participation/social science.
10	Ensure periodic compliance reporting to the public and competent courts.	Accountability is absent; regular reporting ensures transparency, corrective measures, and adherence to doctrines like Polluter Pays (*Indian Council for Enviro-Legal Action v. Union of India*, 1996) and Absolute Liability (*M.C. Mehta v. Union of India* [Oleum Gas], 1987).
11	Treat lakes and drains as "*Entities with Incomparable Values*" and give them enhanced conservation status.	Required under NEP, 2006 (Section 5.2.1) for prioritized conservation, customized regulations, proactive restoration, and enhanced monitoring to prevent irreversible loss (*State of Himachal Pradesh v. Ganesh Wood Products*, 1995), ensuring long-term water security, ecological health, and intergenerational equity.
12	Promotion of NBS-based solutions	Nature-based Solutions (NBS) such as constructed wetlands, bio-swales, floating treatment wetlands, riparian vegetation buffers, and decentralized green infrastructure must be prioritized over hard-engineering. These approaches restore ecological functions, reduce urban flood risks, enhance biodiversity, improve groundwater recharge, and provide co-benefits (carbon sequestration, urban cooling). This aligns with NEP 2006 (paras 5.2.1, 5.2.7), Wetlands Rules 2017, and international commitments under SDG-6 (clean water and sanitation) and SDG-13 (climate action).
13	Framework for lake O&M and rejuvenation	Standardized Operation & Maintenance (O&M) protocols must be framed to ensure accountability and scientific management, covering aspects such as periodic desilting, sewage diversion, aeration, catchment management, biodiversity conservation, and vector control. Absence of such frameworks has led to ad hoc, contractor-driven works with little ecological impact, violating statutory obligations under the KTCDA Act and the Public Trust Doctrine. Model guidelines (including lifecycle cost analysis) should be notified and enforced uniformly across all lakes. In addition, the lake management must be done based on LHI (Lake Health Index) and LAR (Lake Asset Registry).

No.	Action Required	Reason / Problem Being Addressed
14	Framework for formal approval of all chemicals and enzymes meant for use in lakes	Indiscriminate application of untested microbial/chemical agents in lakes (e.g., “magic enzymes,” bacterial cultures) poses unknown risks to water quality, aquatic life, and public health. A regulatory framework is required under KSPCB and CPCB standards to mandate independent scientific testing, approval, and monitoring prior to use. This prevents violations of the Precautionary Principle (*Vellore Citizens’ Forum v. Union of India, 1996*) and ensures conformity with Wetlands Rules 2017 (Rule 7 on maintaining ecological character).
15	Framework for governance in use of CSR funds for lake O&M and rejuvenation	Corporate Social Responsibility (CSR) contributions are often used without transparency, scientific guidance, or community participation, resulting in tokenistic works (beautification, jogging tracks) rather than ecological restoration. A governance framework must ensure CSR funds are pooled, prioritized for science-based rejuvenation, aligned with statutory plans, audited for outcomes, and subjected to public disclosure. This ensures compliance with Section 135 of the Companies Act, 2013 and advances accountability, equity, and intergenerational justice.