

Executive summary

Lakes and reservoirs which are crucial for human survival are facing degradation all over the world. Deterioration of water quality, loss of biodiversity and fast depletion of water resources are the main challenges which need urgent attention. Further, urbanisation has increased pressure on water bodies with increasing demand on land for infrastructural needs.

A Performance audit on “Conservation and Ecological restoration of Lakes under the jurisdiction of Lake Development Authority and Urban Local Bodies” was conducted to assess the effectiveness of the initiatives taken by various agencies involved in conservation and rejuvenation of the lakes in urban and semi-urban areas.

The results of Performance audit showed that institutional mechanism for conservation and restoration of lakes was weak. Lake Development Authority, being the regulatory body for monitoring and supervising the activities of entities involved in restoration works of lakes, was inactive as it was not carrying out its mandated roles and responsibilities. Lake Development Authority did not initiate measures for an integrated approach in planning and prioritisation of lakes for restoration amongst all the entities responsible for conservation, restoration and development of lakes. Coordination among the implementing agencies was deficient, resulting in works taken up without adequate prioritisation, construction of sewage diversion channels, fencing without removal of encroachments, etc.

(Chapter III - Paragraphs 3.1 to 3.4)

Efforts to involve local communities in the conservation and restoration of lakes were absent as no lake management committees, involving voluntary organisations, had been established for any of the test-checked lakes. Grievance Redressal Mechanism was not effective as there was no move towards establishing a single window grievance redressal cell. Transparency in administration of lakes was poor as partial information only was available in public domain. While monitoring of restoration works was lacking, financial management needed strengthening.

(Chapter III - Paragraphs 3.5 to 3.7)

Survey and demarcation of the lakes test-checked remained incomplete. The extent of the lake area varied in different records indicating reduction in lake area over a period of time. This was mainly due to grant of lake area for construction of roads; infrastructure and residential layouts; and change in land use. Also, encroachment of lake area caused choking/blocking of catchment drains, loss of foreshore area and wetland thereby leading to shrinkage in water spread area. Instances of reduction in height/breach of waste weirs leading to shrinkage in water spread area were also observed.

(Chapter IV - Paragraphs 4.1 to 4.6)

Neither the Karnataka State Pollution Control Board nor the implementing agencies had complete data on the pollution levels in the lakes. The assessment of pollution was inadequate and the water quality of none of the test-checked lakes conformed to the prescribed standard. Major source of pollution in Bengaluru was sewage which could not be regulated by Bengaluru Water Supply and Sewerage Board. The construction of underground drainage lines to convey sewage was still under progress and the treatment of sewage was inadequate. The diversion of sewage, due to it being untreated, from the inlets to the waste weir of the lakes resulted in drying up of lake beds, and loss of its ecological characteristics.

(Chapter V - Paragraphs 5.1, 5.2 and 5.6)

Deficiencies were noticed in restoration works carried out by the implementing agencies. Works like de-silting were carried out excessively and without justification. Improper construction of embankments prevented free inflow of run-off water from the surrounding catchment areas thereby reducing the water inflow into the lakes. Instead of prioritising core works for lake rejuvenation, non-core works were given undue significance. The agencies had not assessed the impact of pollution in lakes and related risks to human health, biodiversity and ground water.

(Chapter V- Paragraphs 5.5, 5.7 and 5.10)

Preservation of biodiversity in the test-checked lakes was badly affected due to destruction of gentle slopes on shorelines and formation of ringed elevated bunds. This caused irreparable damage to the fragile wetland ecosystem and resulted in loss of habitat of aquatic weeds and birds. No buffer zone within 30 metres of the periphery of the lake was ensured; instead it was observed that the buffer zone had been breached in several cases.

(Chapter VI)

Lake specific findings of the 12 test-checked lakes indicated that in most cases restoration works were carried out without arresting sewage flowing into the lakes and water quality was not being monitored. Works were also undertaken without removal of encroachments.

(Chapter VII)