

LITERATURE SURVEY

REAL-TIME RIVER WATER QUALITY MONITORING AND CONTROL SYSTEM

In recent years, all the natural water bodies of India are losing its life due to contamination by the influence of human activities. An important source of water is the river. It has been proved that the number of polluted rivers is increasing every year because of poor management of industrial and residential wastes, which are disposed into the river in excess amounts.

The pollution due to industries is the major cause of wasting away of our environment. It affects the power of water, air and soil that humans use. Due to the increasing pollutant load in the water body, the groundwater quality gets affected which in turn spoils the quality of soil as well. The availability of clean and potable water in rivers decreased due to increased pollution level which affects the ecology of the river basin.

The main reason for the water pollution is the mismanagement of industrial wastes, violation of **Central Pollution Control Board's rules and regulations** and ignorance of the public in water resources usage. The river quality is to be assessed for every short interval for the impending river linkage projects carried out in India.

The supply of such river water for domestic purposes may have repercussions for the health and safety of people. As stated by the WHO, nearly 80% of health problems in humans are because of the poor water quality. Apart from the humans getting affected, the land productivity also gets affected because of the contaminated water.

Water quality parameters of rivers.

S. No	Name of the River	pH	EC(μ S/cm)	BOD(mg/l)	COD(mg/l)	TDS(mg/l)	TSS(mg/l)
1	Kolong River, Assam	6.59–6.75	60–410	7.06–17.8	–	210.75–299	97.88–178.21
2	Erode Region Cauvery River	Avg7.86	920	38	304	1004	690
3	River Yamuna	7.81–8	1046.5–1195.3	19.3–25.8	58–85	856.5–936	–
4	Mahanadi River(Post-monsoon)	6.89–8.08	–	2.6–5.8	–	63–21,771	–
5	Atharbanki River	6.45–7.17	–	9.8–17.6	–	1729–5405	–

The above table shows the water quality parameters of some rivers namely Cauvery, Yamuna, Atharbanki, Mahanadi & Kolong river for pH, EC, BOD, COD, TDS and TSS.

Conclusion

From the above study, it could be noticed that the quality of most of the natural water bodies like river as well as groundwater has been exploited and has come to a scarce level. The human beings are directly or indirectly being affected by such water pollution which is caused by them. The quality of water could be improved by imposing proper remediation.