

PREFACE

In a metropolitan city like Bengaluru, the water crisis encapsulates a multifaceted challenge stemming from rapid urbanisation, depleting groundwater reserves, and inadequate infrastructure. As one of India's fastest-growing cities, Bengaluru faces escalating water demand, exacerbated by population influx and industrial expansion. Compounded by erratic rainfall patterns and unchecked urban sprawl, the city grapples with dwindling water sources and contamination issues, manifesting in acute shortages and water quality concerns. The confluence of these factors underscores the urgent need for holistic water management strategies to address the crisis and ensure sustainable water security for its increasing populace.

The assessment of the current state of domestic water supply infrastructure and resources serves as the cornerstone for effective water management strategies. By scrutinizing factors such as population dynamics, urbanization trends, and evolving consumption patterns, insights into the adequacy of existing water sources vis-à-vis demand can be gleaned. Such nuanced understanding is indispensable for policymakers, water authorities, and utilities alike, guiding prudent decision-making regarding infrastructure investments, resource allocation, and water governance frameworks.

In the context of Bengaluru's water crisis, scientific study is paramount as it provides empirical evidence, informed insights, and data-driven solutions crucial for effective water management. It enables a comprehensive understanding of the complex interplay of factors contributing to the crisis, including hydrological dynamics, socio-economic trends, and environmental pressures. By employing methodologies such as hydrological modelling, water quality analysis, and socio-economic assessments, scientific studies offer invaluable insights into the current state of water resources, trends in demand-supply dynamics, and vulnerabilities to future risks. Moreover, scientific research facilitates developing and evaluating innovative interventions, ranging from sustainable water harvesting techniques to policy frameworks promoting conservation and