Global water use has increased by six times in the past century. Water demand is growing twice as fast as the population. However, the World Water Development Report states that at least four billion people experience water scarcity for at least one month each year. Accessing safe drinking water is crucial for global water security. Contaminated water is responsible for about 80% of the disease burden in developing nations, causing significant physical, psychological, and economic hardships. It also leads to millions of infants worldwide, with diarrhoea being the second leading cause of death for children under five. Increasing reliance on groundwater also presents new challenges due to geological contamination.

With 17% of the global population, India only has 4% of fresh water. Water availability differs within the country, with the east and north having more resources than the south and west. Climate change leads to more drought and floods, making weather patterns unpredictable. This has impacts on the environment, societies, and sustainable development. Climate change and water security are interconnected issues with significant implications.India is in the midst of a water crisis.

“The leading cause is the imbalance between supply and demand and poor water resource management. Over the past 75 years, there has been a 75% decrease in annual per capita water availability, from 6042 cubic meters in 1947 to 1486 cubic meters in 2021.”

When annual per capita water availability falls below 1700 cubic meters, it is considered water-stressed, and below 1000 cubic meters is water scarcity. India is on the verge of becoming a water-scarce country. India’s irrigation system is extensive but inefficient. The quality of water is a concern due to untreated sewage pollution. Access to clean water and sanitation is limited. Additionally, we are further polluting our already scarce freshwater sources.

Water security is crucial for India’s development. The demand for water in India will rise by more than 70% by 2025, creating a large gap between supply and demand. This scarcity will hinder economic growth. Groundwater depletion is also a concerning problem. Lower water tables increase pumping costs and cause crop and revenue losses for farmers. Over-extraction results in salty irrigation water, affecting long-term water availability. Furthermore, inadequate water quality and limited access to sanitation contribute to disease and poor health.A comprehensive approach is necessary to assess water’s current state and dynamics, which includes considering meteorological and hydrogeological issues and socio-hydrological aspects to understand the interactions between water resources and society. At CDD India, we prioritize community water conservation and implement measures for water security to promote sustainable development and ensure a secure society.

India’s diverse aquifer types, rainfall patterns, geological strata, population pressure, and community practices necessitate context-specific Nature-Based Solutions involving multiple stakeholders. CDD’s approach to community water conservation includes environmental education, which is crucial in promoting water security by raising awareness about sustainable water management practices and empowering individuals to be responsible stewards of water resources