

Scientific knowledge of water in ancient India as reflected in the Sanskrit literature

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Water is not lost in undergoing various processes of hydrological cycle namely, evaporation, condensation, rainfall, stream-flow etc., but gets converted from one form to another: It was known and scientifically understood during the Vedic period. Water intake by plants, division of water into minute particles by sun rays and wind, different types of clouds, their heights, their rainfall capacities etc., along with the prediction of rain-fall quantity in advance by observation of natural phenomenon is illustrated Puranas, Brhat Samhita, Meghmala and other literature. The reference of rain-gauges are also available in early compositions such as Astadhyayi of Panini and Arthasastra of Kautilya. The quantity of rain-fall in various parts of India was also known to Kautilya. Indians were acquainted with the cyclonic and orographic effects on rain-fall, radiation and convectional heating of earth. Various other phenomena of infiltration, interception, stream-flow, geomorphology, artesian wells and erosive action of water were well understood. Ground-water development and quality consideration were getting sufficient attention as evidenced by Brhat Samhita Water management and conservation, well organized water pricing system, Construction methods and materials of dam, tanks etc., bank protection, spillways and other considerations mentioned in the ancient books reflect the high stage of development of water resources and hydrology in ancient India. The paper intends to analyse this scientific awareness in ancient Indian culture.