

# A STUDY OF WATER BALANCE PARAMETERS WITH REFERENCE TO ENVIRONMENTAL PROBLEMS IN KATHMANDU

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The components of the hydrological cycle, namely precipitation, surface water, groundwater, and evaporation, have a profound influence on the environment. Precipitation is seen as a natural scavenger of pollution and precipitation intensity as the cause of soil erosion. The amounts of conventional pollutants and soil washed out by precipitation were estimated for Kathmandu. Inadequate precipitation often causes partial failure of crop, leading to periodic scarcity in Kathmandu. The characteristics of such dry spells, such as their frequency, variations, and so on, have been fully examined and discussed.

For drinking water supply, especially during the dry season, Kathmandu has to depend mostly on groundwater resources which are preserved for longer periods of time and should be properly utilised. It is reported that the present trend of excessive extraction of ground water may deplete the water to dangerous levels and hazards like soil subsidence, reduction of dry weather flow in rivers and springs, and deterioration of water quality will occur in the future. Keeping this in mind, hydrological aspects of groundwater are analysed and discussed. The role of evaporation in introducing particulate matter into the atmosphere has also been briefly examined.