

3.1 THE WATERY PLANET 3.1.1 Distribution Ninety seven per cent of water on the Earth is marine (salt- water), while only 3% is freshwater (Figure 3.1).With re- gard to the freshwater, 79% is stored in polar ice caps and mountain glaciers, 20% is stored in aquifers or soil moisture, and 1% is surface water (primarily lakes and rivers).Possible effects of global warming, combined with continued increases in human population and economic development are resulting in critical concern for the future sustainability of freshwater resources.The limited supplies of surface waters and groundwa- ter receive significant amounts of the pollutants generated by humans.An es- timated 110,000 km³ of rain, snow, and ice falls annually on land surfaces, and this is what replenishes fresh water re- sources.Lakes across the planet have an average reten- tion time of 100 years, meaning it takes 100 years to re- place that volume of water.Rivers, on the other hand, have a much shorter retention time.