

Simulation of Water Supply in The City of Lima For the Period 2020-2050 Using the WEAP Platform

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Summary - The objective of this study has been to develop a hydrological model in the WEAP platform, to know the water coverage of the water supply of the city of Lima in a current scenario (2020), in the short term 2025, medium term (2035) and long term term (2050). The WEAP (Water Assessment and Planning System) model has been calibrated and validated with the historical records of the Rímac, Chillón and Lurín rivers, which have information from the 1965-2019 period. Currently, the supply of drinking water to the city of Lima comes mainly from the Rímac River, with an average flow of 18.63 m³ / s and in the dry season it is complemented by the exploitation of groundwater from the Rímac, Lurín and Chillón Aquifers. with a volume of 287 MMC / year. It is important to indicate that the water resources of the Rímac River are complemented by the contributions of the Macapomacocha I, III and IV projects that contribute a volume of 243.5 MMC / year and the contributions of the Graton tunnel are 158 MMC / year. From the simulations carried out, it is concluded that there is currently a water deficit of 182 MMC / year and a coverage of 81.8%.

Keywords: Weap, Simulation, water supply, water coverage, water deficit.