PAPER TITLE: WATER ASSET ACCOUNT OF LAGUNA DE BAY BASIN, PHILIPPINES

AUTHORS: BRANDO M. ANGELES[1], EMITERIO C. HERNANDEZ[1]

AFFILIATIONS: [1] LAGUNA LAKE DEVELOPMENT AUHTORITY

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ABSTRACT: The movement of water in the hydrologic system of Laguna de Bay Basin is important for various human demands such as domestic use, agricultural production and industrial development. The process of water cycle in the basin replenishes the water resources of the largest inland water body in the Philippines. Behavior of the basin in generating water resources is analyzed for the years 2000 until 2012 through Hymos 4 and Delft3D computer software models. Moreover, weather data such as precipitation and evaporation from several weather stations are used for the analysis. In addition, records from regulatory agency for industrial water discharge are significant for accounting the amount of water influenced by human activities. Results of the hydrologic computer models provided information on the amount of water inflow and outflow in the basin. Inflow of water into the basin is simulated through Hymos 4 model while the amount of discharged water out of the basin and interaction to nearby water body is processed by Delft3D model. Hence, the stored water resource in the basin is determined in per annum basis expressed in million liters unit. Furthermore, a water balance is derived from the method incorporating the amount of inflows, outflows and change in storage for the period of analysis. In the end, System of Environmental-Economic Accounting (SEEA) water account asset was generated to define inflow and outflow of water resources in the Laguna De Bay Basin.