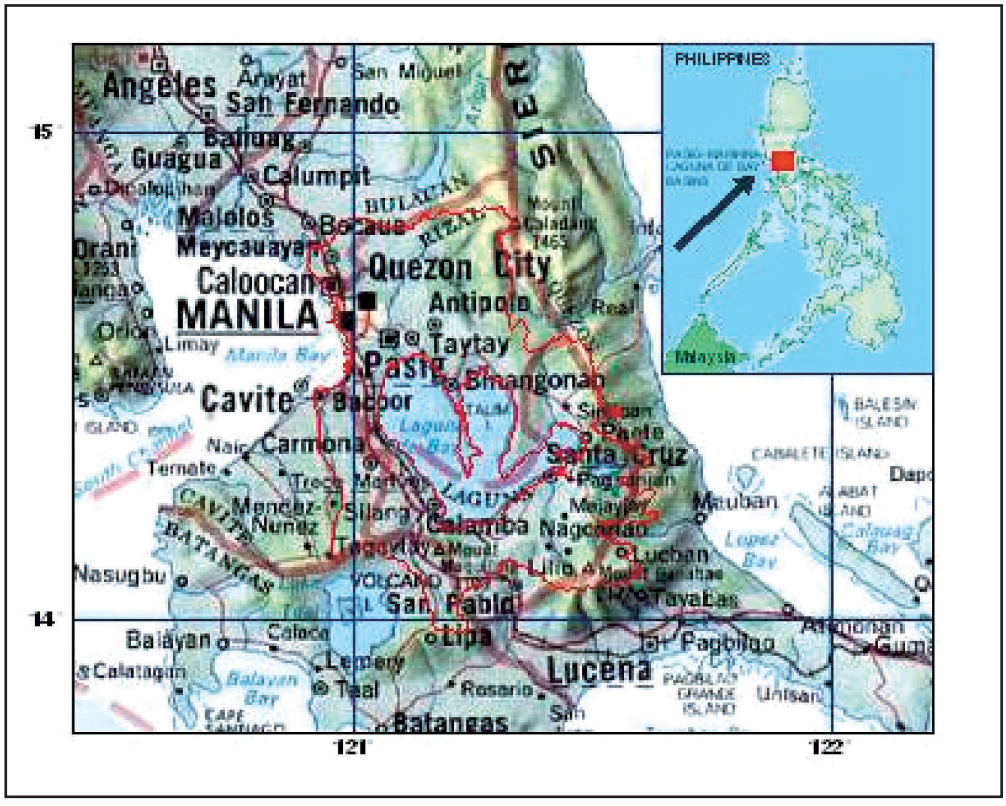
Philippines

Philippines-4: Pasig-Marikina-Laguna de Bay Basins



Introduction

The Philippines lies in the Southeastern Asia, and is an archipelago between the Philippine Sea and the South China Sea. It is composed of about 7,100 islands and islets with a total land area of approximately 300,000 km^2, of which about 94% is contained within the 11 principal islands, namely Luzon, Mindanao, Samar, Negros, Palawan, Panay, Mindoro, Leyte, Cebu, Bohol and Masbate. The country is divided into three major island groups, namely Luzon with an area of 141,000 km^2, Mindanao with 102,000 km^2 and Visayas with 57,000 km^2. Since it lies in the tropics, near the equator, weather in the Philippines is hot and highly humid. Temperatures vary from 25°C to 35°C. There are two seasons, both directly governed by the monsoon. The southwest monsoon called Habagat blows from June to November, which meets the Philippines in its path and is laden with moisture that consequently produces the rainy season. On the other hand, the northeast monsoon called Amihan from December to May brings rather dry cool temperatures; however from March onwards, the later part of the dry season becomes really hot. The terrain is mostly mountainous with narrow to extensive coastal lowlands. The highest point is Mount Apo in Mindanao with a summit elevation of 2,954 m. Natural hazards in the Philippines include typhoons, cyclonic storms, landslides, active volcanoes, destructive earthquakes and tsunamis.

The Philippines has a total of 18 major river basins with at least 1,400 km^2 of watershed area. These river basins are the Cagayan, Pampanga, Agno, Abra, Pasig-Marikina-Laguna de Bay, Bicol and Abulug River basins in Luzon Island; the Agusan, Agus, Davao, Cagayan de Oro, Mindanao, Tagum-Libuganon, Tagoloan, and Buayan-Malungun River basins in Mindanao Island; the Panay and Jalaur River basins in Panay Island; and the Ilog-Hilabangan River basin in Negros island. They cover a total area of 108,678 km^2 equivalent to 36.2% of the total land area of the Philippines.

The Pasig-Marikina-Laguna de Bay Basin, which is catalogued in this volume, is one of the major river basins of the country. It dwells within latitudes of 13° 55' to 14° 50' N and longitudes of 120° 50' to 121° 45' E in Luzon Island, Philippines. It is comprised of 2,942.0 km^2 of the Laguna de Bay watershed, 871.2 km^2 of Laguna de Bay lake proper, and 709.5 km^2 of the adjacent Metro Manila River sub-basins, for a total drainage area of 4,522.7 km^2. Metro Manila which is the main attraction for population migration of the archipelago has a total population of around 11 million in the year 2000. This is about 13% of the whole population of the country. Other Metro Manila environs contained in the basin include some towns of Bulacan, Cavite, Laguna, Batangas, and Rizal. The estimated population in these adjacent towns as of year 2000 is around 3 million. The Pasig-Marikina-Laguna de Bay basin is classified under two climate types. The major portion of the basin is classified under Type I climate with two pronounced seasons, dry from November to April and wet from May to October. A smaller eastern part (less than 10% of the total area) falls under Type IV climate having an even rainfall distribution throughout the year. The area derives its rainfall mostly from the southwest monsoon and the convergent storm cells associated with the Intertropical Convergence Zone from May to October and the northeast monsoon from October to January. The mean monthly temperature in the region varies from 25 °C to 30 °C and the mean annual temperature is placed as 27 °C. Monthly relative humidity in the basin ranges from 95% in August and September to 55% in March and April with the mean annual relative humidity taken as 76%.

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