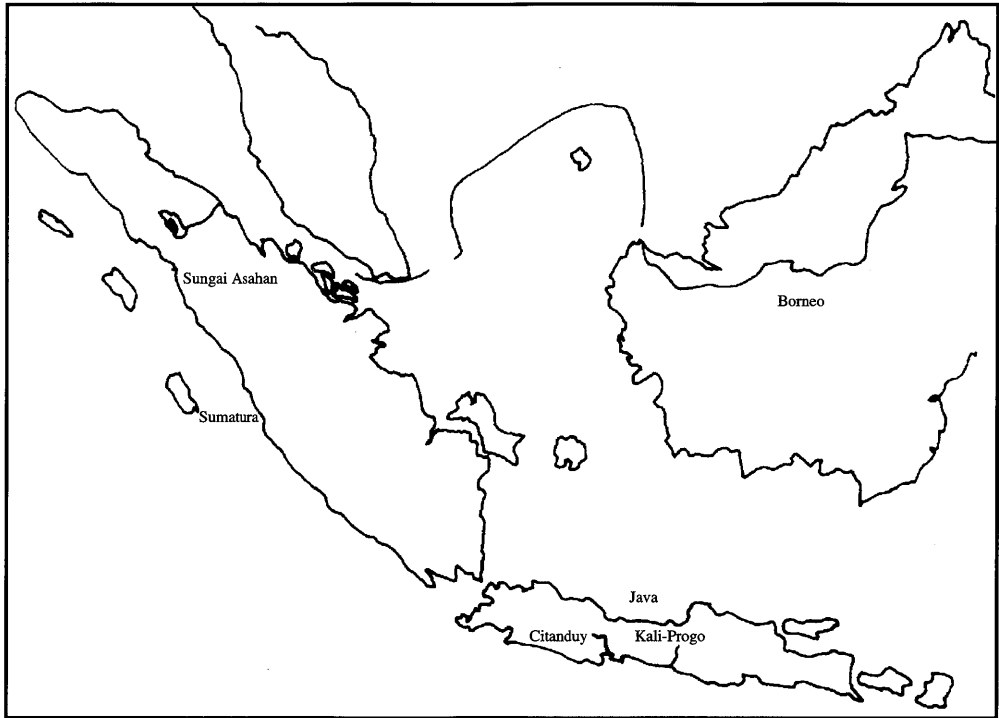


Indonesia

Indonesia-4: Sungai Asahan

Indonesia-5: Citanduy

Indonesia-6: Kali-Progo



Introduction

The Indonesia archipelago situated in south-east Asia consists of five main islands (Sumatra, Kalimantan, Sulawesi, Java and Irian Jaya) and some 13,667 other smaller islands with a total area of 1.9×10^6 km². Geographically, Indonesia is located between the latitudes 6° 08' N - 11° 15' S, and longitudes 94° 45' E - 141° 05' E. The total population according to the 1995 census was 194.755 million with the forecast increase at about 1.68 % / year. Population distribution is uneven throughout the country. Java Island has the highest population density whereas the outer islands have very much lower densities.

Politically, Indonesia is divided into 27 provinces, 241 districts, 55 urban municipalities, 3,625 sub districts and 67,033 villages. Most of the rivers are short, steep and productive in sedimentation. Indonesia is a tropical country affected by tropical monsoon rainfall having two distinct dry and wet seasons. In the wet season, it experiences heavy rainfall, ranging from 2,500 to 6,000 mm/year. In the dry season it is very dry during a 2 month period normally between July and September.

The three rivers catalogued in this volume are the Asahan located in Sumatra island, the Citanduy and the Kali Progo located in Java island. They are the representative rivers of the salient characteristics indicated above, that is, flood, urban, megalopolis, industrial development and agricultural area, respectively.

The Asahan, located in North Sumatra, originates from Toba lake and flows into the Mollaca Strait. The river is one of the most potential rivers in Sumatra island to support hydropower projects or industrial development. Problem mostly faced is flood, which happens every year especially in the lower part.

The Citanduy, located in West Java, originates from Mt. Cakrabuana and flows into the Indian Ocean through the lagoon of Segara Anakan. The main problem of the basin is flooding caused by very flat areas and meanders in the lower part especially from the town of Banjar to the downstream. At the confluence with Cijolang river up to the river mouth, the stretch is used as a border between West Java and Central Java.

The Kali Progo is located in Central Java and Yogyakarta Special Territory and flows through several mountain ranges such as Sumbing, Sundoro, Merapi, Merbabu and Menoreh. Of these, Merapi and Sundoro are still active volcanoes with the latter erupting very infrequently. Merapi on the other hand is one of Indonesia's most active volcanoes, generally erupting at 3-7 year intervals. The bed material of Kali Progo is comprised largely of ashes, sands and boulders of an andesitic type. Due to the success of the sediment control structures, degradation of the channel is taking place at present.

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