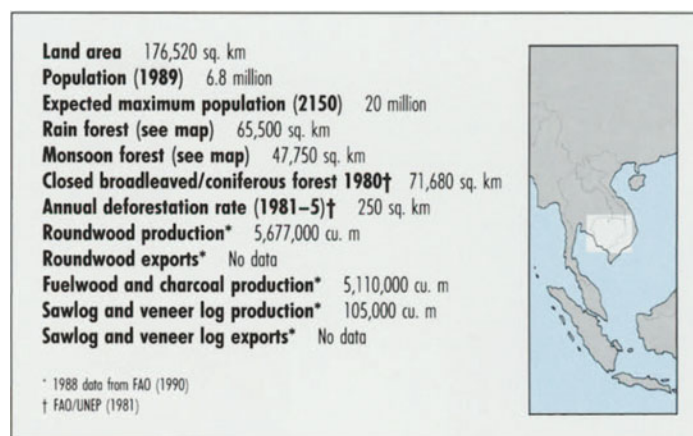


16 Cambodia



Until the 1970s, Cambodia was a tranquil backwater in the heart of Indo-China. It had extensive forests whose valuable timber was largely unexploited, some of Southeast Asia's most important wetlands and the Khmer Ruins, a spectacular reminder of the turbulent history of the region. Then the Vietnam War spilled over into the country, and for 20 years every aspect of Cambodian life was totally disrupted. Data on the remaining extent and condition of Cambodia's forests are extremely poor. The only mapped information dates back to 1970 and statistical data to 1980.

INTRODUCTION

Cambodia is situated in tropical Indo-China, straddling the great Mekong River between Thailand and Vietnam, with Laos to the north-east. The greater part of Cambodia comprises the plain of the lower Mekong valley, with the western slopes of the Annamite chain in the east lying along the Vietnam frontier, and the isolated highlands of the Elephant and Cardamom mountains in the west, adjacent to south-east Thailand and the Gulf of Thailand. The country has a short coastline of only 435 km. The climate is dominated by the south-west and north-east monsoons; the south-west monsoon lasting from May to October and the north-east from November to March. The average annual rainfall is between 1200 mm and 1875 mm, with a pronounced dry season between November and March, but rainfall up to 3000–4000 mm may be experienced in the south-west (Legris and Blasco, 1972).

The Mekong river runs southward across the plains, its delta lying in Vietnam. Part of the western plains are occupied by the huge, shallow Tonlé Sap or Great Lake, which flows into the Mekong throughout most of the year, but which usually floods back from the main river during the rainy season, becoming a vast storage reservoir. During the dry season, the vast floodplains of the Mekong River and Tonlé Sap are extensively cultivated. The Cardamom mountain range dominates the south-west of the country, rising to an elevation of 1563 m. In the south and south-east are low plains bordering the Mekong River, extensive areas of which are seasonally flooded. North of Tonlé Sap, the area leading to the borders with Laos and Thailand consists of rolling savanna country with some open grassland and areas of deciduous forest.

The 1989 population was estimated at 6.8 million, more than 90 per cent of whom were Khmer, with small minorities of Vietnamese and Chinese. The southern part of the country is densely settled and largely given over to rice growing; indeed agriculture and fisheries are by far the most important sources of livelihood. Some 93 per cent of the cultivated land is dedicated to rice production, which accounts for 40 per cent of the gross domestic agricultural product. To the north the human population is generally low; for example, there are as few as four persons per sq. km in the Stung Treng and Monduliri Provinces.

The Forests

The Elephant and Cardamom mountains in the west, and the western slopes of the eastern Annamite chain, are open to the full force of the south-west monsoon. The tropical moist forests of these ranges and adjoining lowlands covered over half of Cambodia as recently as the 1960s. Evergreen rain forests were confined to the western slopes of the Elephant and Cardamom ranges, while semi-evergreen rain forests were extensive in the lowlands to the east of the Tonlé Sap and on the western slopes of the Annamite chain. The forests on the Annamite mountains have largely been cleared or severely damaged by shifting cultivation. They also suffered from defoliation and bombing during the Vietnam war.

By contrast, the forests of the Elephant and Cardamom mountains, particularly the rain forests on the western slopes, are said to be little disturbed, due to the very low human population of this region. Rollet (1972), and Legris and Blasco (1972) have described these rain forests. At lower elevations, *Palaquium obovatum* is common. Five species of Dipterocarpaceae – *Anisoptera costata*, *A. glabra*, *Dipterocarpus costatus*, *Hopea odorata* and *Shorea hypochra* – are widespread. Palms, particularly rattans, are especially abundant. Fagaceae are also present, notably *Castanopsis* and *Lithocarpus*. Curious patches of dwarf forest occur in poorly drained depressions. These are rich in palms, and also include the conifers *Dacrydium pierrei* and *Podocarpus neriifolius*. At elevations above 700 m, the forests are subject to frequent fog, high winds and low winter temperatures. Species of Fagaceae are more frequent and include an endemic oak, *Quercus cambodiensis*.

Freshwater permanent and seasonal swamp forest once occurred in the area surrounding the Tonlé Sap. The same formation, dominated by *Melaleuca*, also occurred in the Mekong delta on the south-east frontier adjacent to Vietnam. Mangroves were once extensive around Veal Renh and Kompong Som bays, and north of Kas Kong, up to the border with Thailand. Only discontinuous bands of mangrove now remain and production of firewood and charcoal has declined.

The rest of Cambodia has a drier, more seasonal climate and the climax vegetation normally consists of a variety of dense deciduous and semi-deciduous monsoon forest formations. Vast areas,

