

Soil Resources and Land Use in Cambodia

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Geology and climate

Cambodia is a country in mainland South-east Asia, bordering Thailand, Laos, Viet Nam, the Gulf of Thailand, and covers a total area of 181,035 km². Main geographical features are relatively flat in central plain that includes the Tole Sap basin, the lower Mekong River flood-plains and Bassac River plain surround by mountain ranges to the north, east, in the south-west and south. Elevation is less than 50 m was considered as lowland, more than 1,000 m as upland, and the highest point is 1,813 m, where located at Aural mountain (Fig. 1).

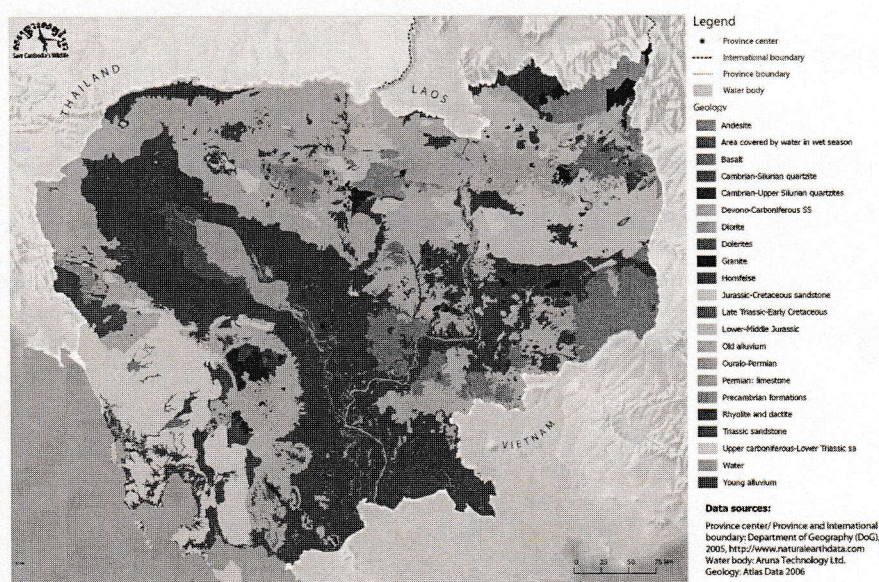


Fig. 1: Geology map of Cambodia.

Source: Open Development Cambodia (2016a).

Cambodia is located in tropical zone north of the equator, and warm to hot year round and the climate is dominated by the annual monsoon cycle with its alternative rainy and dry seasons (Fig. 2). Dry season is the northeast monsoon runs from December to April and rainy season comes when the winds shift into the southwest monsoon from May to November.

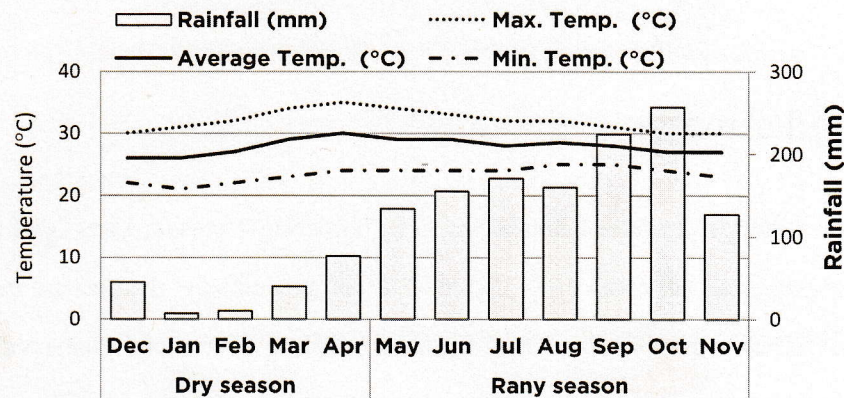


Fig. 2: Monthly rainfall and temperature in Cambodia.

Source: The World Bank Group (2016).

Soil resources

Cambodia's soils are mainly developed on the old alluvial and/or colluvial plains (White and Oberthür 1997). Sandy materials cover a large proportion of the landscape of the country. Based on Crocker (1962), 16 soil groups were classified (Fig. 3) and categorized as low (53%), medium (19%) and high (28%) fertility levels (Fig. 4).

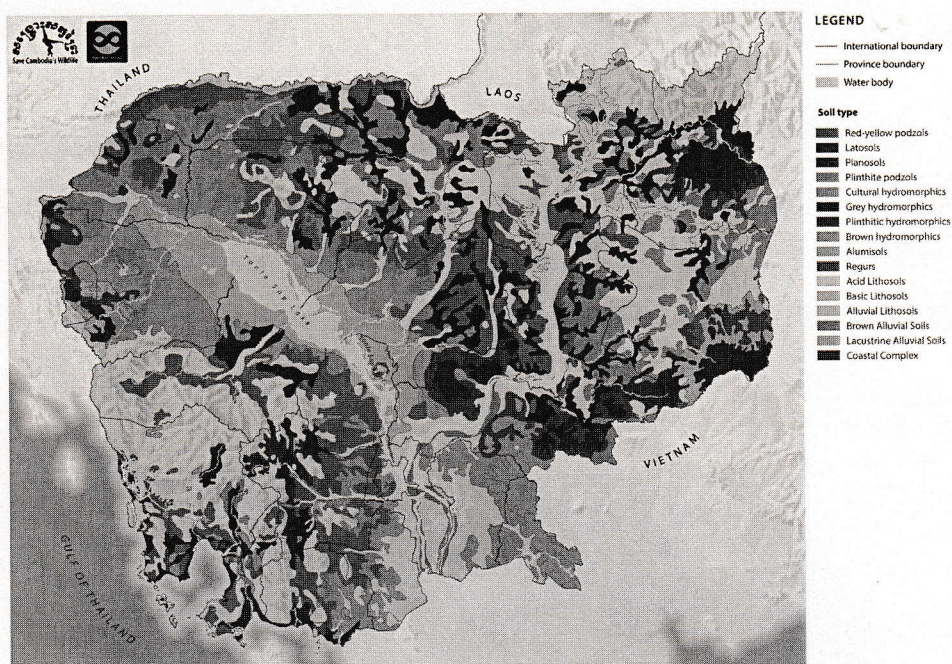


Fig. 3: Soil map of Cambodia.

Source: Crocker (1962).



Fig. 4: Soil fertility of Cambodia.

Source: Open Development Cambodia (2016a).

Land use

More than half of total area was covered by forest (Area of forest cover was decreased from 73% of total land area in 1990 to 56.3% in 2011 (Fig. 5), while agricultural land area was increased from 13.88% in 1973 to 32.86% in 2014; and other parts are shrubland, grassland, soil-rock, urban and water (World Bank 2016). Agricultural land is mainly located in central plains of the country.

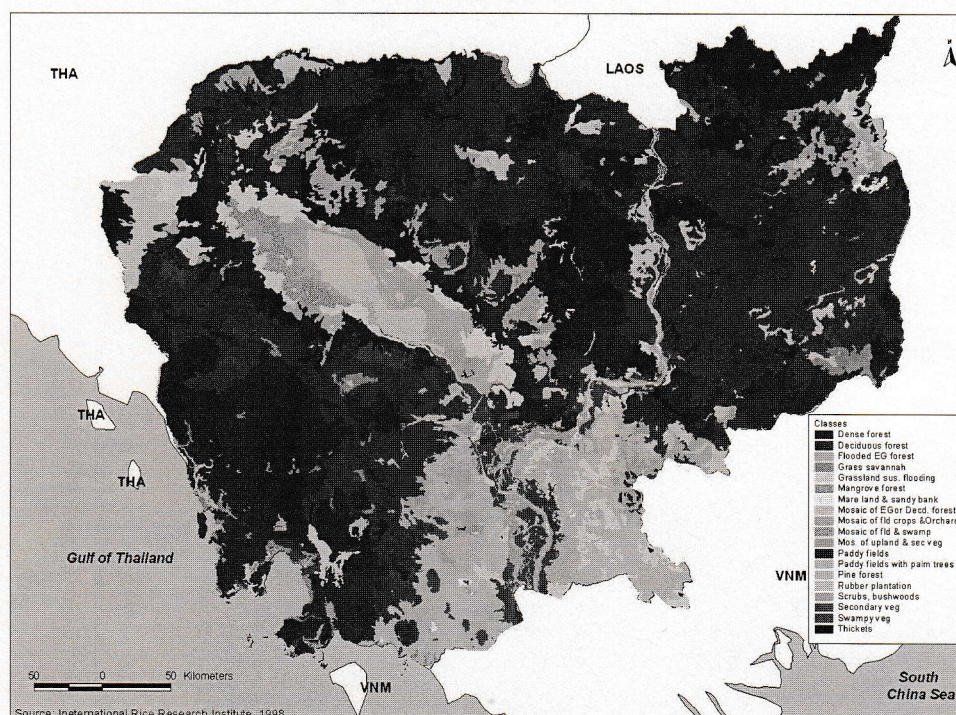


Fig. 5: Land use and land cover in Cambodia.

Source: International Rice Research Institute (1998).

Rice is a major crop growing in the country, which covered over 3 million hectares annually, following by cassava, maize, soybean, vegetable, mung bean, sugarcane, sesame, peanut and tobacco (Fig. 6).

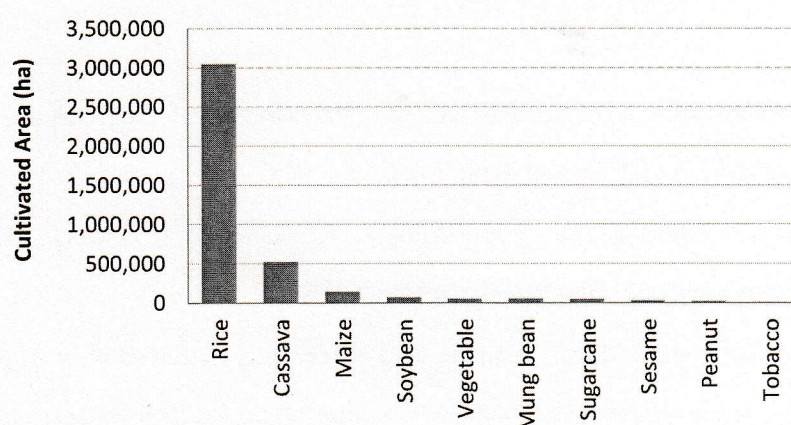


Fig. 6: The 10 major crops growing in Cambodia.

Source: Ministry of Agriculture, Forestry and Fisheries (2015).

Economic land concession (ELC) is a long-term land lease, usually 99 years, that allows a concessionaire to clear land in order to develop industrial-scale agriculture, and can be granted for various activities including large-scale plantations, raising animals, and building factories to process agricultural products. Ministry of Agriculture, Forestry and Fisheries (MAFF) in 2015, reported that between 1996 and June 2012, MAFF signed ELC contracts with 118 companies covering a total land area of 1,204,750 hectares (Fig. 7) (MAFF 2015 in Open Development Cambodia 2016b).

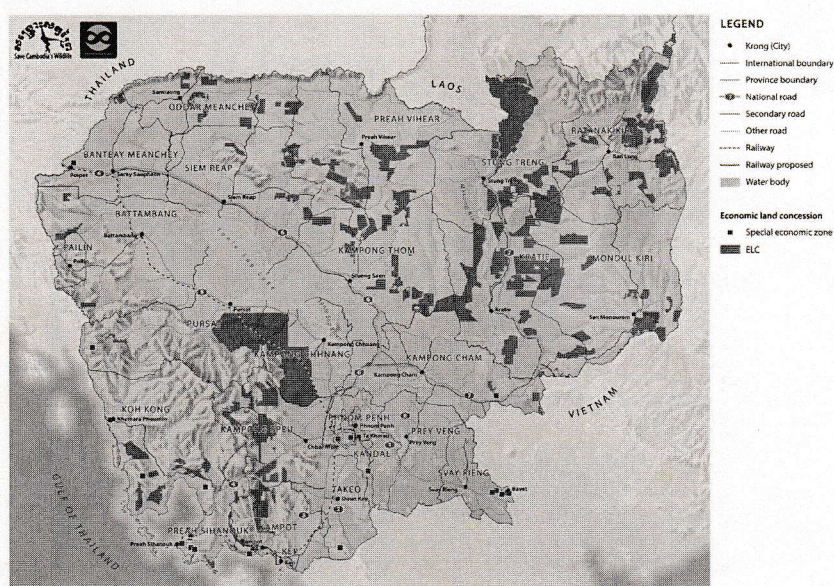


Fig. 7: Map of economic land concession in Cambodia.

Source: Open Development Cambodia (2016a).

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