

ABSTRACT

Thesis Title : Changing of Physical Geography of
Ko-Lok River : Study The Tendency of
Meander in Narathiwat Province
Student's Name : Squadron Leader Vullop Prombang
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The purpose of this research was to study the physical condition of Ko-Lok river, especially in changing of river bank from the past to the present, during that year B.E.2454 to B.E.2534; study the Ko-Lok river channel changes the direction, the meander; finding the priorities of erosive areas of river bank for conservation; and study the appropriate way to delimit the boundary.

The results of this research were as the followings :

1. During B.E.2454 to B.E.2534 Ko-Lok river has changed her condition effecting by the erosion of river bank both into Thailand and Malaysia continuity. The erosion process operated through a river bank of Malaysia, and the erosive area was 2.22 square

kilometres. For Thailand, the erosive area was 1.71 square kilometres. Then, the river bank of Malaysia was destroyed about 0.52 square kilometres (about 326.83 rai) more than river bank of Thailand. It indicated that the hypothesis of no. 1 is negative.

2. Study the meander after the "Cycle of Erosion Theory" of W.M.Davis. The result indicated that the studied areas of Ko-Lok river has fallen in "Old Age" because only 6.5 percent of the earth's surface is still remained from the erosion process. It shows that the hypothesis of no.2 is positive.

3. Study the physical condition of Ko-Lok river in the present based on sinousity, geometric of river, slope of river bed, water discharge, rainfall, geological condition, soil type, landuse, and constructions. The result presented the areas should protect river bank from erosion. It found that the first priority of erosive area of river bank for conservation is four areas; these are, two areas at Tambon Ka Yu Cla and Amphur Sungai Ko-Lok. Thus, the result of this study shows that the hypothesis of no. 3 is negative.

4. Study the physical changes of Ko-Lok river and the meander during the year B.E.2454 to B.E. 2534, the researcher divided into 5 periods as B.E.2454-2491,

B.E.2454-2510, B.E.2454-2525, B.E.2454-2529, and B.E.2454-2534. The result described that Ko-Lok river has changed the direction of river channel for three periods onto the river bank of Malaysia, and the area is about 2.69 square kilometres. For Thailand, Ko-Lok river has changed the direction only two periods, and the area is about 1.54 square kilometres. In forecasting Ko-Lok river channel is rolling between Thailand and Malaysia. In order to use Ko-Lok river to delimit the boundary of two countries, the researcher presents the appropriate method is "fixed boundary" instead of thalweg method.