

C615131 : MAJOR CIVIL ENGINEERING

KEY WORD: DEVELOPMENT / IRRIGATION / OPERATION AND MAINTENANCE / RANGSIT PROJECT

KOSON PRASONGSOM : IRRIGATION DEVELOPMENT - PAST PRESENT AND FUTURE: CASE STUDY OF THE RANGSIT PROJECT THESIS ADVISOR: MR. CHAIYUTH SUKSRI, 188 pp. ISBN 974-635-958-4

"Irrigation Development - Past, Present and Future: Case Study of Rangsit Project" is a study on concepts, policies on irrigation development and on evolution, patterns and procedures on water resources and irrigation system development under certain physical, environmental, engineering, and socio-economic constraints for each particular period.

The study includes an analysis of effects resulting from operation and management of various water resources and irrigation systems from the early period of the excavation of the "Rangsitprayasakdi Canal" to the present; and also an analysis on trend for future irrigation development in order to identify alternatives for improvement and suggestions/recommendations on planning and rehabilitation of irrigation system.

The study employs a historical-based technique in searching for data/information and evidences from documents, books, photographic archives and a field investigation on the present condition of the Area. System analysis and qualitative research approaches are used to analyze and identify relationships among data/information for each particular period.

The result of the study reveals the importance of the Rangsit Area, in terms of irrigation development in Thailand, which has been continuously developed by introducing advanced irrigation techniques before any other areas. In the beginning an "inundation irrigation" method with simple water control structures was introduced. Later on a "gravity irrigation" technique was employed in the upper part of the Area. Further on, a "pumping irrigation" system is utilized for controlling excess/flooded water and to deliver irrigation water. With present land-use condition whereby parts of agricultural land has been transformed into residential, industrial, commercial and educational areas, agricultural land, however, remains the most important part of the Rangsit Area. Moreover, several new on-going and planned water resources development projects in the upper part of the Chao Phraya and the nearby basins could supply additional water to the Area. Consequently, in the future there is a strong need for a study on an appropriated water allocation among existing and newly developed projects. This study shall include consideration and evaluation on the past development and problem-solving strategies, and also include a clear policy on water utilization and management. A specific government agency with a particular/direct responsibility for water allocation, operation and maintenance of irrigation water, flood mitigation and waste water control shall be established. Furthermore, in case of a suggestion on revitalizing and improvement of canals' control structures to be able to serve both irrigation water and navigational requirements simultaneously.

ภาควิชา วิศวกรรมโยธา (แหล่งน้ำ)

สาขาวิชา วิศวกรรมแหล่งน้ำ

ปีการศึกษา 2539

ลายมือชื่อนิสิตร

ลายมือชื่ออาจารย์ที่ปรึกษา

ลายมือชื่ออาจารย์ที่ปรึกษาร่วม