

Wannaporn Kwamsuk 2006: Effect of Mekong Dam Construction on Streamflow Characteristic Change of Lower Mekong River. Master of Science (Watershed and Environmental Management), Major Field: Watershed and Environmental Management, Department of Conservation. Thesis Advisor: Associate Professor Wicha Niyom, Ph.D. 90 pages. ISBN 974-16-1873-5

The effect of Mekong dam construction in Chaina on streamflow characteristic change of lower Mekong river was investigation Mekong river in flow through Thailand. It was carried out historical data of runoff amount 5 gaging stations (Chiang Sean, Chiang Khan, Nakhon Phanom, Mukdahan and Khong Chiam) in 1975-2002. To comparing of streamflow characteristic between pre-dam construction period (1975-1996) and post-dam construction period (1997-2002)

Results showed that mean annual discharge of Mekong river at the Chiang Sean, Chiang Khan, Nakhon Phanom and Mukdahan gaging station in post-dam construction period was higher than pre-dam construction period. But the Khong Chiam gaging station in post-dam construction period was lower because this is station so far from dam construction area and have water from draining area of lower Mekong river basin. In pre-dam construction period the maximum monthly discharge was on August but post-dam construction period the maximum monthly discharge was on September because dam reservoir storage in early wet period. All gaging station was investigation in post-dam construction period have percent of streamflow in wet period was higher than pre-dam construction period and percent of stramflow in dry period was lower than pre-dam construction period. Flow date of cumulate flow volume at 25, 50, 75 and 95 percent of annual discharge on Mekong river in post-dam construction period was faster than pre-dam construction period. Regarding flow timing characteristic, it was observed that quarter flow and half flow interval in post-dam construction period was shorten indicating higher risk of flood but longer period of 5 and 1 percent flow interval during dry period implying a longer in post-dam construction period indicating these drought. As the streamflow characteristic of Lower Mekong river was changed. It also must plan using water resource for sustain yield and plan to reduce follow problem.

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