

RESEARCH ON DRY SEASON FLOW VARIATION AND ITS IMPACTS ON THE OPERATION OF MAJOR HYDRAULIC WORKS IN THE MAINSTREAM OF CA RIVER

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Summary

Ca river Basin is characterized with advantageous topography and water resources. The investment into the basin was ample with irrigation and hydropower reservoirs for socio-economic development of Nghe An and Thanh Hoa provinces. Nevertheless, frequent and severe droughts and water scarcity was reported in the recent years. This was a result of difficulties encountered in the operation of hydraulic works in the mainstream of Ca River. This study aims to analyze the variation of dry season flow and its impacts to the operation of hydraulic works in the mainstream of Ca river using station-measured hydrological data during 1958-2018, in combination with collected data at hydraulic works during 2015-2018 and result from hydrodynamic model MIKE 11. The case studies of 2 irrigation systems of Do Luong Barrage and Nam Dan Sluice (both new and old sluice) were used in this study. It is resulted in a set of recommendations for sound management and operation of Ca River's water resources in the future.

Keywords: *Ca River, Do Luong barrage, Nam Dan sluice, MIKE11.*