The Influence of Environmental Factors, Human Activity, and Empowerment on The Population of Arwana in Kuala Mahato River at Mahato Village, District Of North Tambusai Rokan Hulu, Riau. Under the guidance of Mr. Vandrian Dewantoro and Daru Retnowati. Arwana is a primadonna Mahato village as a resource the most sought after because of its economic value. The Kuala Mahato River is the habitat of Arwana is currently endangered. The aim of research are: (1) analyze the influence of environmental factors on the Arwana populations in the Kuala Mahato River, (2) analyze influence of human activities factors on the Arwana populations in the Kuala Mahato River, and (3) analyze influence of the empowerment factor on the Arwana populations in Kuala Mahato River. The research method used explanatory technique to analyze a model of the relationship between environmental factors, human activities, and the empowerment to the Golden Red Arwana populations in the Kuala Mahato River. This study is associative research to determine the effect of independent variables on the dependent variable. This study was done in June 2011 at the Kuala Mahato region administration of the Mahato village of Tambusai, District North Of Rokan Hulu, Riau. The finding of this research are shown that the populations of Arwana in the Kuala Mahato River was influenced by environmental factors, human activity, and empowerment.It caused by Arwana habitat degradation and aquatic conditions is unable to Arwana survival.

Key words: Arwana population, environmental, human activity, empowerment