

**Water and Institutions: A Case Study on Pump-Based Irrigation Rice Farming  
in Wajo District, Indonesia**

**Rahim Darma**

Department of Agricultural Economics/Agribusiness, University of Hasanuddin,  
Indonesia

Email: rdarma@unhas.ac.id

**Abstract**

The water crisis due to population growth and climate changes has turned water into a commodity and a production factor in the agricultural sector. The objective of the study is to analyze the water status as a production factor and institution formation in its use in pump-based rice farming. The research method is a case study at three different locations in Wajo District, selected site study based on the level of failure risk from floods and water availability used for irrigation. The characteristics of rice farm management and the established institutions are compared descriptively among the three selected study sites. The overall results show that the rice farming management system is dominated by a profit and risk sharing and partnership system. The institution of a pump-based irrigation system regulates the rice cultivation system properly. The schedule of tillage and planting follows the irrigation water supply tightly to shorten the planting period and to overcome the risk of failure due to flooding, drought, or pest and disease attacks. The institution encourages the less-capital farmers to cooperate with pump enterprises for procuring fertilizers and pesticides. The cost of rice farms is shared between land owners and farmers, thus encouraging farmers to take advantage of financing from irrigation pump entrepreneurs. The irrigation-based pump could be developed by strengthening the farmer group or local entrepreneurs through the support of government and financial institutions.

**Keyword:** Water, institution, irrigation, pumping system, rice farming