ABSTRACT

Benny Rachman. Analyzing Irrigation Water Institution To Support Efficiency and Optimization of Irrigation Water Distribution In The Development Area of IP-Padi 300, West Java (Under The Supervision of Prof. Dr. Ir. Bunasor Sanin, M.Sc., as Chairman; Prof. Dr. Ir. F. Gunarwan Suratmo, M.F.; Prof. Dr. Ir. Kooswardhono Mudikdjo, M.Sc.; Dr. Ir. Achmad Mudzakir Fagi, M.Sc., and Dr. Ir. Andin H. Taryoto, as Co-Supervisors).

The long drought in 1997, caused by El-Nino, led to a drastic decline of the national rice production. At this time, the production deficit was reached 4 million ton. In addition, the La-Nina which followed the El-Nino has caused the rain fall was far above the normal level and a long rainy season causing the secondary crops could not grow in several major rice production areas. To use the excess water availability, a program stimulating rice plant after the First Dry Season (MK I) was launched, and it was called as “the 300 Rice Cropping Intensity” or IP-Paddy 300, implying a cropping pattern of Paddy-Paddy-Paddy.

The objectives of this study are: (1) to analyse managing irrigation water institution, (2) to analyse efficiency level of irrigation water used, (3) analyzing of the land optimizations for the development of IP-Padi 300, and (4) developing institution model of irrigation system. Descriptive Analysis, Path Analysis, Efficiency and Goals Programming are Employed simultaneously in the study.

The study show that total efficiency of the irrigation was found low, ranging from 29.3 percent at Curug Agung Irrigation Area to 38.1 percent at Macan Irrigation Area, while at Cipadang-Cibeleleng Irrigation Area was 41.6 percent. The efficiency of water use at the plot level (sawah) was also low, ranging from 59.6 percent at Curug Agung, 60.8 percent at Macan and 61.7 percent at Cipadang-Cibeleleng.

Based on optimization analysis, to optimizing land use of IP 300 that can achieve various planned objectives suggested planted rice area of the Second Dry Season (MK II) are as follows: (1) 4,809 ha at Macan Irrigation Area, (2) 1,831 ha at Curug Agung Irrigation Area, and (3) 1,810 ha at Cipadang-Cibeleleng Irrigation Area. All suggested activities are limited to rice farming with a simultaneous planting time so that the risk of pest outbreak and late planting schedule could be minimized.

Besides the changes in the farmer level, the success of irrigation management is also depended on the management at the distribution and allocation levels. Therefore, institution that should be given attentions are The Irrigation commission (provincial and district levels), The Water Allocation Commission (PTPA), The Water Resource management Unit, and P3A.

To improve efficiency at the local level, the involvement of farmers in managing irrigation water distribution should be promoted up to the upper level, i.e. through the development of P3A unification (gabungan P3A) based on hydrological spread i.e. Irrigation Area. It is expected that the P3A self-reliance might be encouraged by letting P3A manage the collection and management of IPAIR fund. A self-reliance and transparent management will encourage farmer participation of paying the water fee.

Keywords: IP-Padi 300, P3A Unification, IPAIR, Efficiency, and Institutional.