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ESTIMASI NILAI EKONOMI AIR IRIGASI PADA USAHA TANI PADI SAWAH DI DAERAH IRIGASI *VAN DER WIJCE*, KABUPATEN SLEMAN, YOGYAKARTA

(ESTIMATING THE ECONOMIC VALUE OF IRRIGATION WATER ON RICE FARMING SYSTEM IN *VAN DER WIJCE* IRRIGATION AREAS, DISTRICT OF SLEMAN, YOGYAKARTA)

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ABSTRACT

Demand for rice increases with population and over time. However, the challenges to meet the increasing demand for rice are constrained by some factors: conversion of agricultural wetland (paddy field) to non-agricultural uses, deterioration of irrigation channals, increase scarcity of water, and increase intersectoral competition of water use. These conditions have raised the concern of water irrigation distribution efficiency in rice production. Agricultural sector has to produce more rice with less irrigation water. In addition, water irrigation charges (IPAIR) are also problematic in the area, since there is no water charge. The purpose of this research is to estimate the economic value of water irrigation at *Van der Wijce* irrigation areas in Yogyakarta, to determine the more appropriate water charges; and to evaluate the differences in water values with respect to their locations (upper, middle, and lower areas), cropping intensity, and rice productivity. Farmers at the upper irrigation areas could plant rice up to three times a year, while at the lower areas only twice a year. The productivities of rice were also different between these two areas, where the upper areas used more water and resulted in higher yields compared to the lower ones. Water values was estimated using Wicksteed's product exhaustion approach. These results implied that the values of water were higher at the upper areas compared to the lower ones. The estimated value of water was about Rp 44/m^3 in the upper areas, while in the middle and lower areas were about Rp 32 m^3/ha and Rp 23 m^3/ha, respectively. Since there is no water charge in the area, there is no fund to cover the costs of water distribution and maintenance. This could lead to unsustainable irrigation management. The above estimated water values could be used as benchmark, the maximum level, by the local government of Sleman and the farmers groups in the irrigation areas in determining the irrigation water charges and maintaining the sustainability of irrigation water services. However, this water charge has to be followed by the improvement in water management system to maintain effective and efficient water distribution among the farmers.

Keywords : rice production, efficient water use, water value and tariff, sustainable irrigation services

ABSTRAK

Permintaan beras terus mengalami peningkatan dengan semakin meningkatnya jumlah dan penghasilan penduduk. Namun, upaya untuk pemenuhan kebutuhan beras tersebut dihadapkan pada berbagai tantangan, antara lain: adanya konversi lahan pertanian ke non-pertanian, kerusakan jaringan irigasi, semakin langkanya sumberdaya air, serta kompetisi antar sektor dan antar wilayah dalam penggunaan air. Kondisi-kondisi ini mengisyaratkan perlunya peningkatan efisiensi penggunaan air dalam produksi padi. Sektor pertanian harus mampu meningkatkan produksi padi dengan lebih sedikit air. Selain itu, hingga saat ini, iuran penggunaan air irigasi (IPAIR) bagi petani pengguna air belum diimplementasikan. Tujuan penelitian ini adalah untuk mengestimasi nilai ekonomi air irigasi di Daerah Irigasi Van der Wijce di Yogyakarta untuk menentukan iuran layanan air secara lebih akurat, serta untuk membandingkan nilai air irigasi pada daerah hulu, tengah dan hilir Daerah Irigasi Van der Wijce. Petani di daerah hulu mampu menanam padi hingga tiga kali, sementara di bagian hilir hanya dua kali per tahun. Tingkat produktivitas padi juga berbeda diantara kedua daerah ini, dimana petani di daerah hulu menggunakan lebih banyak air dan menghasilkan output yang lebih tinggi dibandingkan dengan daerah hilir. Kondisi ini menunjukkan bahwa nilai air irigasi semestinya lebih tinggi di daerah hulu dibandingkan dengan daerah hilirnya. Pendekatan nilai sisa Wickstead digunakan dalam menentukan nilai air

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