

ABSTRAK

ANALISIS HIDROLOGI DAN PENYEBAB BANJIR DI KAWASAN PERTANIAN UNGGULAN DESA TRIMOMUKTI KECAMATAN CANDIPURO LAMPUNG SELATAN (Studi Kasus)

Desa Trimomukti yang berada di wilayah administrasi Kecamatan Candipuro, Kabupaten Lampung Selatan, merupakan daerah subur yang menjadi andalan Pemerintah Lampung Selatan, sebagai daerah penghasil padi paritas premium, yang telah dicanangkan sebagai kawasan Pertanian Persawahan Unggul dan telah ditetapkan sebagai Pilot Proyek Pertanian Cerdas (*Smart Farming zone*) luas area 1019 ha. Luas area persawahan produktif di Desa Trimomukti sebanyak 1300 Ha, yang dikelompokkan menjadi area 1 (zona 1) mencakup luas area persawahan $\pm$ 281 Ha, dan area 2 (zona 2) mencakup luas area sawah, $\pm$ 1019 ha. Permasalahan yang dihadapi pada area persawahan adalah sering terjadi banjir pada musim hujan yang merendam sawah hingga ketinggian 50-70 cm sehingga merusak seluruh tanaman dan pada musim kemarau mengalami kekurangan air sehingga tidak bisa menanam padi.

Penelitian ini bertujuan untuk mengidentifikasi penyebab banjir di Kawasan tersebut. Beberapa metode yang dipakai antara lain Hidrograf Satuan Sintetis (HSS) Snyder, HSS Nakayasu, HSS Gama I. Dalam studi ini yang digunakan HSS Nakayasu. Hasil penelitian menunjukkan bahwa Curah hujan maksimum di kawasan tersebut sebesar 118,33 mm. Kebutuhan air untuk pertanian mencukupi untuk kebutuhan sawah di Desa Trimomukti. Penyebab banjir bukan karena curah hujan yang tinggi namun karena kiriman air dari hulu Sungai Way Ketibung yang memasuki areal pertanian. Kondisi ini diperparah dengan saluran air pembuangan dipenuhi tumbuhan eceng gondok dan banyak sedimen serta tidak ada lagi pintu pengendali air saluran sehingga air dari sungai menggenangi kawasan pertanian. Alternatif solusi menangani masalah adalah dengan penataan sistem aliran serta pemanfaatan bangunan penampung air seperti *long storage* dan *checkdam* yang bisa berfungsi sebagai pengendali banjir pada musim hujan sekaligus sebagai penyedia cadangan air irigasi pada musim kemarau.

Kata kunci: hidrologi, banjir, saluran air, pintu air, long storage, checkdam

ABSTRACT

HYDROLOGICAL ANALYSIS FLOOD CAUSES IN THE SUPERIOR AGRICULTURAL AREA OF TRIMOMUKTI VILLAGE, CANDIPURO DISTRICT, SOUTH LAMPUNG (A CASE STUDY)

Trimomukti Village, located within the administrative area of Candipuro District, South Lampung Regency, is a fertile area that serves as a key agricultural zone for the South Lampung Government. It is a major producer of premium-grade rice and has been designated as a smart Agricultural Pilot Project. The total productive paddy field area in Trimomukti Village covers 1,300 hectares, which is divided into Area 1 (Zone 1) with approximately 281 hectares and Area 2 (Zone 2) with approximately 1,019 hectares. The main problems faced in this paddy field area are frequent flooding during the rainy season, which inundates the fields to a depth of 50–70 cm and damages crops, and water shortages during the dry season that prevent rice cultivation. This study aims to identify the hydrological conditions and the causes of flooding in the area. Several methods are commonly applied, including the Synthetic Unit Hydrograph (SUH) of Snyder, the Nakayasu SUH, and The Gama I SUH. In this study, the Nakayasu Synthetic. The research results show that the maximum rainfall in this area is 118.33 mm. The availability of water for agricultural purposes is sufficient to meet the irrigation needs of the paddy fields in Trimomukti Village. Flooding is not caused by high local rainfall but by inflows from the upstream section of the Way Ketibung River that enter the agricultural area. This condition is further exacerbated by drainage channels clogged with water hyacinth vegetation and heavy sedimentation, as well as the absence of functional water control gates, allowing river water to inundate the agricultural land. An alternative solution to address these issues is the reorganization of the flow system and the utilization of water storage structures such as long storage and checkdams, which can function as flood control facilities during the rainy season while also providing irrigation water reserves during the dry season.

Keywords: hydrology, flooding, drainage channels, water gates, long storage, checkdam