

Intisari

Lahan pertanian dataran tinggi di Kabupten Magelang berperan penting dalam menunjang produksi pangan, namun di sejumlah area menghadapi degradasi berupa longsor, pergerakan tanah dan kerusakan struktur tanah. Kondisi ini dapat mempengaruhi ketahanan pangan rumah tangga petani. Penelitian ini bertujuan menganalisis perlindungan lahan pertanian dataran tinggi dari degradasi dan implikasinya terhadap ketahanan pangan rumah tangga petani proyek UPLAND di Kabupaten Magelang.

Metode penelitian yakni deskriptif kualitatif. Teknik pengumpulan data menggunakan pedoman wawancara, observasi dan studi dokumentasi. Analisis data kualitatif diperkuat dengan menggunakan QDA Miner, perangkat lunak untuk menganalisis, membuat kode dan mengidentifikasi pola dan tema.

Hasil penelitian disimpulkan bahwa **pertama**, terdapat 3 (tiga) jenis degradasi lahan yakni longsor dan pergerakan tanah di lahan berlereng, longsor di lokasi pembangunan Jalan Usaha Tani (JUT) Poktan Srigati TA. 2021, dan kerusakan struktur tanah sawah dan air irigasi akibat sampah. Faktor penyebab utama yakni perilaku petani menanam holtikultura berakar pendek di lahan lereng, pembuatan desain konstruksi JUT mengabaikan kontur lahan berlereng dan perilaku membuang sampah plastik di sawah dan irigasi. **Kedua**, terdapat 4 (empat) jenis teknik perlindungan lahan yakni teknik sipil teknis, dan non sipil teknis (vegetatif dan agronomi) serta kombinasi teknik sipil teknis-agronomi. Terdapat 11 (sebelas) bentuk perlindungan lahan oleh proyek UPLAND: pembangunan DAM Parit, JUT, dan Rehabilitasi Jaringan Irigasi Tersier (RJIT), serta swadaya petani: pembangunan talud dan desain lantai irigasi huruf U. Bentuk teknik non sipil teknis swadaya petani: teknik vegetatif penanaman rumput di galengan dan Refugia serta teknik agronomi yakni pengembalian jerami ke lahan dan rencana konservasi penanaman pembenahan lereng di daerah ketinggian di luar sawah UPLAND. Bentuk kombinasi sipil teknis-agronomi: pembangunan Unit Pengolah Pupuk Organik (UPPO) dan Lab. Hayati. Perlindungan lahan DAM Parit dan RJIT mitigasi degradasi akibat erosi air dan UPPO mitigasi degradasi kesuburan lahan relevan dengan keberhasilan proyek UPLAND, kecuali pembangunan JUT TA. 2021 kurang relevan karena tidak memitigasi longsor. **Ketiga**, setelah ada perlindungan lahan di tahun 2024 RJIT, DAM Parit dan UPPO berimplikasi meningkatkan ketersediaan pangan, yakni indeks pertanaman 2 kali/ tahun ($IP > 2$), produksi beras organik di tingkat poktan naik 307,1 ton/ha (12,6%) dan di tingkat rumah tangga petani naik 8 kuintal/panen (8%), dan rumah tangga (RT) rawan pangan turun 1 RT menjadi 6 RT, serta efektif meningkatkan akses pangan secara ekonomi yakni pendapatan poktan rata-rata Rp 2.172.310.000,-/ha (66%) lebih tinggi dibandingkan sebelum ada perlindungan lahan di tahun 2021.

Kata Kunci: *Perlindungan Lahan Pertanian, Degradasi Lahan, Ketahanan Pangan Rumah Tangga Petani*

Abstract

Highland agricultural land in Magelang Regency plays an important role in supporting food production, but in some areas it faces degradation in the form of landslides, soil movement, and soil structure damage. These conditions can affect the food security of farming households. This study aims to analyze the protection of highland agricultural land from degradation and its impact on the food security of farming households in the UPLAND project in Magelang Regency.

The research method is descriptive qualitative. Data collection techniques used interview guidelines, observation and documentation studies. Qualitative data analysis was strengthened by using QDA Miner, a software to analyze, code and identify patterns and themes.

The research concluded that, **first**, there are three types of land degradation: landslides and soil movement on sloping land, landslides at the Poktan Srigati Farm Road (JUT) construction site in fiscal year 2021, and damage to rice field soil structure and irrigation water due to waste. The primary causes include farmers planting short-rooted horticultural crops on sloping land, the design of the JUT construction disregarding the contours of sloping land, and the practice of disposing of plastic waste in rice fields and irrigation systems. **Second**, there are 4 (four) types of land protection techniques, namely technical civil techniques, and non-technical civil techniques (vegetative and agronomic) and a combination of technical-agronomic civil techniques. There are 11 (eleven) forms of land protection by the UPLAND project: construction of DAM Parit, JUT, and Rehabilitation of Tertiary Irrigation Network (RJIT), and farmers' self-help: construction of talud and U-shaped irrigation floor design. Forms of non-civil technical techniques independent of farmers: vegetative techniques of planting grass in galengan and Refugia and agronomic techniques, namely returning straw to the land and conservation plans in 2024 planting slope improvements in high altitude areas outside UPLAND rice fields. Forms of technical-agronomic civil combination: construction of Organic Fertilizer Processing Unit (UPPO) and Biological Lab. DAM ditch land protection and RJIT mitigating degradation due to water erosion and UPPO mitigating soil for land fertility are relevant to the success of the UPLAND project, except that the construction of JUT 2021 is less relevant because it cannot mitigate landslides. **Third**, after land protection in 2024 RJIT, DAM Parit and UPPO will have implications for increasing food availability, an increase in the cropping index to 2 times/year ($CI > 2$), organic rice production at the farmer group level increased by 307.1 tons/ha (12.6%) and at the farmer household level increased by 8 quintals/harvest (8%), and the number of food-insecure households (RT) decreased by 1 RT to 6 RT (14%), additionally it effectively improved economic access to food, with the average income of farmer groups increasing by Rp 2.172.310,000/ha (66%) compared to before land protection was implemented in 2021.

Keywords: Farmland Protection, Land Degradation, Farmer Household Food Security