# ABSTRAK

Irigasi mendukung produktivitas pertanian dalam rangka ketahanan pangan nasional. SubDAS Bedog telah mengalami tekanan pengembangan wilayah perkotaan. Meningkatnya debit puncak akibat meluasnya lahan terbangun. Upaya pelestarian DAS perlu pendekatan menyeluruh dari pemerintah dan masyarakat. Tujuan penelitian adalah mengidentifikasi persepsi petani tentang pengaruh perubahan penggunaan lahan terhadap terhadap ketercukupan air irigasi pertanian di SubDAS Bedog. Mengevaluasi berbagai upaya pelestarian sumberdaya air SubDAS Bedog.

Penelitian ini menggunakan pendekatan kualitatif. Pengumpulan data menggunakan metode pendokumentasian berupa data curah hujan, debit sungai dan perubahan penggunaan lahan. Pengumpulan data kecukupan air irigasi dan upaya konservasi sumber daya air melalui metode survei dan pengambilan sampel aksidental terhadap petani dan wawancara mendalam dengan aparat pemerintah, serta observasi. Teknik analisis data perubahan lahan menggunakan *overlay* peta tata guna lahan dengan *ArcGIS*. Penilaian kualitas subDAS menggunakan klasifikasi koefisien regim aliran. Ketercukupan air irigasi dan upaya konservasi sumber daya air dianalisis secara deskriptif.

Penggunaan lahan dari tahun 2013 sampai tahun 2022 terjadi perubahan dengan meningkatnya luasan lahan permukiman dan lahan terbuka serta semakin menyusutnya lahan persawahan dan hutan yang berpotensi menurunkan tingkat infiltrasi air hujan. Nilai koefisien regim aliran (KRA) termasuk tinggi. Ketercukupan air irigasi lahan sawah saat musim kemarau hanya 21%. Sebagian besar (49%) lahan pertanian mengalami penurunan debit irigasi selama 10 tahun terakhir. Upaya pelestarian sumberdaya air secara vegetatif sudah berjalan optimal namun upaya secara mekanik harus ditingkatkan.

**Kata kunci: perubahan lahan, ketercukupan air, upaya pelestarian**

# ABSTRACT

Irrigation supports agricultural productivity in the context of national food security. The Bedog subwatershed has experienced pressure from urban development. The increase in peak discharge is due to the expansion of built-up land. Watershed conservation efforts require a comprehensive approach from the government and society. The aim of the research is to identify farmers' perceptions of the impact of land use changes on the adequacy of agricultural irrigation water in the Bedog Sub-DAS, evaluate water conservation efforts on The Bedog Sub-DAS.

This research uses qualitative approaches. Collecting data use a method of documenting rainfall data, river discharge and land use changes. Collecting data on irrigation water adequacy and water resource conservation efforts through survey methods and accidental sampling with farmers and in-depth interviews with government officials, as well as observation. Land use changes were analysed using the overlay of land use maps through ArcGIS. Assessment of sub-watershed quality involved classifying flow regime coefficients. The adequacy of irrigation water and water resource conservation efforts were analyzed descriptively.

The land use from 2013 to 2022 will change with the area of settlement land and open land increasing as well as the shrinking of rice fields and forests, which has the potential to reduce the level of rainwater infiltration. The flow regime coefficient (KRA) value is high. The adequacy of irrigation water for rice fields during the dry season is only 21%. The majority (49%) of agricultural land has experienced a decline in irrigation discharge over the last 10 years. Efforts to conserve water resources vegetatively have been running optimally, but mechanical efforts must be increased

**Key words: land change, water adequacy, conservation efforts**