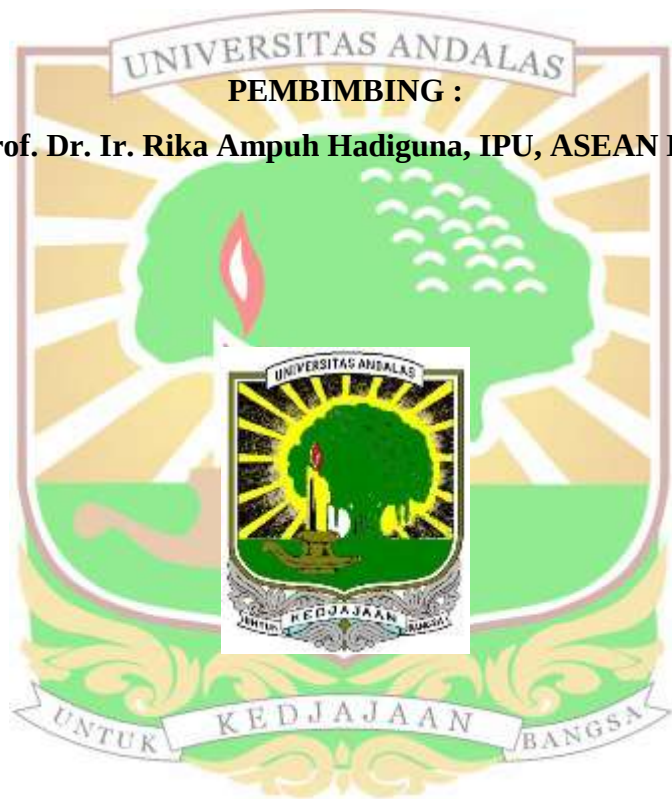


**PERENCANAAN REHABILITASI JARINGAN IRIGASI D.I AIR
PAYANG II, DESA TALANG BUAI KEC. SELAGAN RAYA KAB.
MUKOMUKO**

LAPORAN TEKNIK

Yanlisman Eka Putra

2441612171



**PROGRAM STUDI PENDIDIKAN PROFESI INSINYUR
SEKOLAH PASCASARJANA
UNIVERSITAS ANDALAS**

2025

**PERENCANAAN REHABILITASI JARINGAN IRIGASI D.I AIR
PAYANG II, DESA TALANG BUAI KEC. SELAGAN RAYA KAB.
MUKOMUKO**

Yanlisman Eka Putra

2441612171



**PROGRAM STUDI PENDIDIKAN PROFESI INSINYUR
SEKOLAH PASCASARJANA
UNIVERSITAS ANDALAS
2025**

ABSTRAK

Rehabilitasi bendung dan jaringan irigasi merupakan upaya strategis untuk meningkatkan efisiensi sistem irigasi guna mendukung ketahanan pangan dan keberlanjutan pertanian. Dalam studi ini, dilakukan evaluasi Dan Perencanaan terhadap kondisi eksisting bendung dan jaringan irigasi D.I Air Payang II, Desa Talang Buai Kec. Selagan Raya kab. Mukomuko yang mengalami penurunan fungsi akibat Kerusakan Bendung, sedimentasi, kerusakan struktur, dan kebocoran saluran. Metodologi yang digunakan meliputi survei lapangan, analisis teknis struktur, serta perencanaan desain rehabilitasi berdasarkan standar teknis irigasi.

Hasil evaluasi menunjukkan bahwa kerusakan utama terjadi pada bagian mercu bendung, pintu pengatur, box bagi, serta saluran distribusi primer, sekunder Dan tersier. Tindakan rehabilitasi yang dilakukan mencakup perbaikan dan peningkatan struktur bendung, penguatan tanggul di area bending dan jaringan irigasi, dan perbaikan saluran irigasi yang rusak. Rehabilitasi ini diharapkan bisa meningkatkan efisiensi distribusi air ke areal persawahan dan memperluas cakupan layanan irigasi ke areal persawahan yang belum mendapatkan layanan irigasi. Studi ini menunjukkan bahwa rehabilitasi yang tepat sasaran mampu meningkatkan produktivitas lahan pertanian serta keberlanjutan sistem irigasi jangka panjang.

Kata Kunci : rehabilitasi, bendung, jaringan irigasi, efisiensi air, pertanian berkelanjutan

ABSTRACT

Rehabilitation of dams and irrigation networks is a strategic effort to increase the efficiency of irrigation systems to support food security and agricultural sustainability. In this study, an evaluation and planning were conducted on the existing condition of the dam and irrigation network of D.I Air Payang II, Talang Buai Village, Selagan Raya District, Mukomuko Regency, which experienced a decline in function due to dam damage, sedimentation, structural damage, and channel leakage. The methodology used includes field surveys, technical structural analysis, and rehabilitation design planning based on irrigation technical standards.

The evaluation results show that the main damage occurred in the dam crest, control gate, distribution box, and primary, secondary and tertiary distribution channels. The rehabilitation actions carried out include repairing and improving the dam structure, strengthening the embankment in the bending area and irrigation network, and repairing damaged irrigation channels. This rehabilitation is expected to increase the efficiency of water distribution to rice fields and expand the scope of irrigation services to rice fields that have not received irrigation services. This study shows that targeted rehabilitation can increase agricultural land productivity and the sustainability of the long-term irrigation system.

Keywords : *rehabilitation, dams, irrigation networks, water efficiency, sustainable agriculture*

