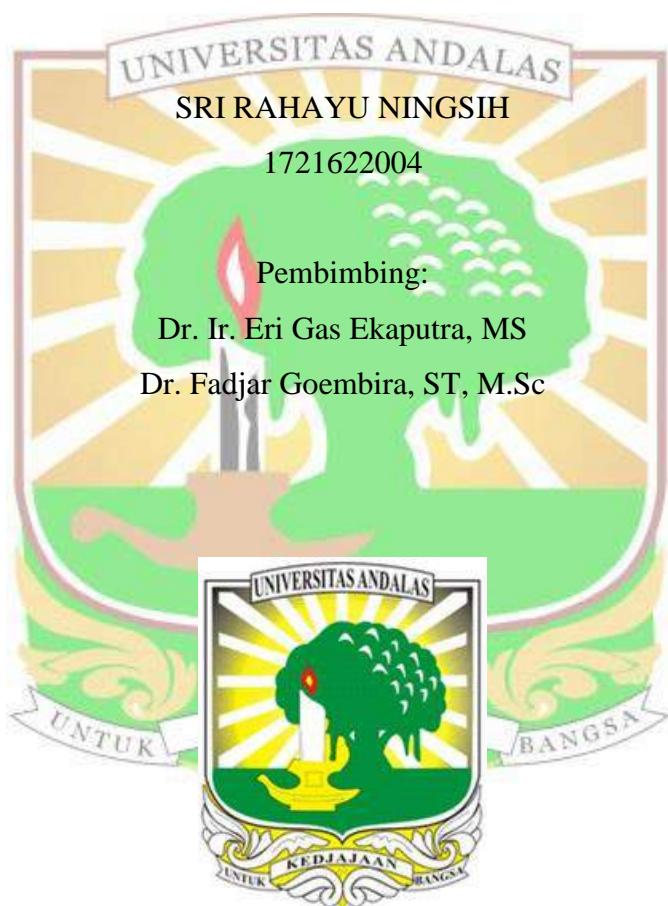


KAJIAN KEBERLANJUTAN SUMBER DAYA AIR
DITINJAU DARI ASPEK KUALITAS AIR DAN SOSIAL EKONOMI
PADA DAS BATANG MERAO

Tesis



PROGRAM PASCASARJANA
UNIVERSITAS ANDALAS
2020

**KAJIAN KEBERLANJUTAN SUMBER DAYA AIR DITINJAU
DARI ASPEK KUALITAS AIR DAN SOSIAL EKONOMI
PADA DAS BATANG MERAO**

Oleh : Sri Rahayu Ningsih (1721622004)
(Dibawah bimbingan: Dr. Ir. Eri Gas Ekaputra, MS dan
Dr. Fadjar Goembira, ST, M.Sc)

ABSTRAK

Pengelolaan DAS Batang Merao menghadapi berbagai permasalahan, antara lain banyaknya kegiatan penambangan pasir dan batuan di kawasan hulu, terjadinya konversi lahan pertanian menjadi lahan terbangun terutama di daerah bantaran dan sempadan sungai. Hasil kajian Dokumen Informasi Kinerja Pengelolaan Lingkungan Hidup (DIKPLH) Kota Sunga Penuh tahun 2018 menunjukkan telah terjadi penurunan kualitas air Sungai Batang Merao. Masyarakat memanfaatkan sungai sebagai tempat pembuangan sampah, limbah cair domestik dan limbah dari aktivitas peternakan. Penurunan kualitas air Sungai Batang Merao dapat menjadi indikator bahwa kondisi DAS telah mengalami kerusakan dan berdampak terhadap keberlanjutan sumber daya air DAS Batang Merao. Penelitian ini bertujuan untuk mengukur keberlanjutan sumber daya air DAS Batang Merao dan mengkaji strategi pengelolaan DAS Batang Merao yang berkelanjutan. Indeks keberlanjutan sumber daya air pada DAS Batang Merao diukur dengan metode *Multi Dimensional Scalling* (MDS). Perumusan strategi pengelolaan Das Batang Merao dianalisis menggunakan analisis SWOT. Hasil analisis MDS menunjukkan bahwa status keberlanjutan sumber daya air DAS Batang Merao kurang berkelanjutan dengan nilai indeks sebesar 40,91%. Strategi pengelolaan DAS Batang Merao dapat dilakukan dengan meningkatkan koordinasi antar lembaga, penyusunan kebijakan perlindungan dan pengelolaan sumber daya air, pengembangan sistem pengolahan air limbah domestik, memanfaatkan limbah menjadi sumber energi alternatif, revegetasi/rehabilitasi lahan pertambangan, membuat bangunan pengendali sedimen, mengembangkan dan menerapkan sistem pertanian berkelanjutan, mengembangkan bank sampah berbasis partisipasi masyarakat dan pengembangan *ecovillage*.

Kata kunci: Indeks Pencemaran (IP), *Multi Dimensional Scalling* (MDS), SWOT.

WATER RESOURCES SUSTAINABILITY : BASED ON WATER QUALITY AND SOSIO ECONOMIC ASPECT IN BATANG MERAO WATERSHED

By : Sri Rahayu Ningsih (1721622004)
(Supervised by : Dr. Ir. Eri Gas Ekaputra, MS dan
Dr. Fadjar Goembira, ST, M.Sc)

ABSTRACT

The management of the Batang Merao Watershed faces various problems, among others the number of sand and rock mining activities in the upstream area, the occurrence of land conversion agriculture becomes a developed land, especially in areas along riverbanks and borders. The result review of Sungai Penuh City's Environmental Management Performance Information Document (DIKPLH) showed that there had been a decline in the quality of the Batang Merao River. Public use the river as a place for garbage disposal, domestic liquid waste and sewage from animal husbandry activities. The decline in the quality of the Batang Merao River can be an indicator that the condition of the watershed has been damaged and has an impact on the sustainability of the water resource of Batang Merao Watershed. This study aims to measure the sustainability and the management strategy of the water resource. The sustainability index of water resources in the Batang Merao watershed is measured by Multi Dimensional Scalling (MDS) method. The formulation of the management strategy of Batang Merao watershed analyzed using SWOT analysis. MDS analysis result showed that statu the sustainability of the Batang Merao Watershed is not sustainable with an index value by 40,91%. The management strategy of the Batang Merao watershed can be done by improving the coordination between institutions, preparation of policies on protection and management of water resources, development of domestic wastewater treatment systems, utilizing waste as a source alternative energy, revegetation/rehabilitation of mining land, making controlling buildings sediment, develop and implement sustainable agriculture systems, develop waste bank based on community participation and ecovillage development.

Kata kunci: *Pollution Indeks (IP), Multi Dimensional Scalling (MDS), SWOT.*