

## ABSTRAK

Salah satu akibat dari sampah yang terus menumpuk di TPST (Tempat Pengolahan Sampah Terpadu) Piyungan adalah terbentuknya air lindi yang mengandung banyak senyawa dengan kadar pencemar yang tinggi. Air lindi merupakan penyebab utama yang memperburuk kualitas airtanah di sekitar TPST. Tujuan dari penelitian ini adalah untuk mengetahui kualitas dan persepsi masyarakat terhadap airtanah, mengkaji tingkat kerusakan lingkungan airtanah, merumuskan strategi pengelolaan lingkungan airtanah di sekitar TPST Piyungan. Metode penelitian yang digunakan yaitu survei lapangan dan wawancara kepada masyarakat di sekitar lokasi penelitian. Penentuan titik sampling menggunakan pendekatan *flownet* dengan jumlah sampel 11. Pengujian kualitas airtanah dianalisis di laboratorium. Penentuan persepsi masyarakat dengan wawancara, penentuan sampel masyarakat ditentukan secara purposif sampling. Penentuan tingkat kerusakan menggunakan IP (Index Pencemaran). Persepsi masyarakat terhadap kondisi airtanah di sekitar TPST Piyungan yaitu masih bagus dan layak digunakan untuk kebutuhan sehari-hari. Tingkat kerusakan lingkungan airtanah berdasarkan analisis Indeks Pencemaran (IP) diperoleh 3 (tiga) klasifikasi status mutu, yaitu: memenuhi baku mutu ( $0 \leq PI \leq 1,0$ ), tercemar ringan ( $1,0 < PI \leq 5,0$ ), dan tercemar sedang ( $5,0 < PI \leq 10$ ). Strategi yang dapat digunakan yaitu pendekatan teknologi meliputi memperbaiki Instalasi Pengelolaan Air Lindi (IPAL) dan remediasi airtanah yang sudah tercemar, pendekatan sosial dengan sosialisasi kepada masyarakat di sekitar TPST Piyungan dan memberikan pendidikan pengolahan sampah dari sumber langsung pada masyarakat DIY secara umum. Pendekatan Instansional dengan cara pembaharuan AMDAL dan monitoring kondisi Lingkungan secara berkala.

**Kata Kunci:** Sumur, Airtanah, *Groundwater*, Lindi, *Leachate*, TPST Piyungan

## ABSTRACT

The garbage that continues to accumulate at the Piyungan landfill is the formation of leachate which contains many compounds with high levels of pollutants. Leachate is the main cause that worsens the quality of groundwater around landfill. The purpose of this study was to determine the quality and public perception of groundwater, to assess the level of damage to the groundwater environment, to formulate a groundwater environmental management strategy around the Piyungan TPST. The research method used was a field survey and interviews with the community around the research location. Determination of sampling points using the approach flownet with a total sample of 11. Groundwater quality testing is analyzed in the laboratory. Determination of public perception by interview, determination of community samples determined by purposive sampling. Determination of the level of damage using IP (Pollution Index). The community's perception of groundwater conditions around the Piyungan landfill is that it is still good and suitable for daily use. The level of groundwater environmental damage based on Pollution Index (IP) analysis obtained 3 (three) quality status classifications, namely: meeting quality standards ( $0 \leq PI \leq 1.0$ ), lightly polluted ( $1.0 < PI \leq 5.0$ ), and moderately polluted ( $5.0 < PI \leq 10$ ). The strategy that can be used is a technological approach including repairing the Leachate Water Management Installation (IPAL) and remediation of polluted groundwater, a social approach by outreach to the community around the Piyungan landfill and providing education on waste management from direct sources to the Yogyakarta community in general. Institutional approach by updating the AMDAL and monitoring environmental conditions on a regular basis.

**Keywords:** Wells, Groundwater, *Leachate*, Piyungan landfill