

The Study of Land Physical Carrying Capacity to Determine Final Waste Disposal Facilities (FWDF) Location in Prambanan District, Sleman Regency, Yogyakarta

Hefrie Muartaqhnan 114070055

Faculty of Mineral Technology, Environmental Department
Universitas Pembangunan Nasional “Veteran” Yogyakarta

ABSTRACT

Waste problems often became major issue of urban environment, including Daerah Istimewa Yogyakarta. This problems were not only about society’s waste disposal behavior, but also about local waste disposal facilities to Final Waste Disposal Facilities (FWDF) provisions. FWDF Piyungan as regional FWDF that managed together by Yogyakarta City, Sleman Regency and Bantul Regency’s Government is currently at the end of its usage period. This research was conducted to give alternative FWDF relocation as solution to overcome the Yogyakarta’s waste problems. The research was conducted in Prambanan District, Sleman Regency, Yogyakarta. The purpose of research is to determine the physical carrying capacity level related to Final Waste Disposal Facilities development in Prambanan District referring to SNI 03-3241-1994 and SK SNI T-11-1991-03.

The research methodology used to determine FWDF location is scoring and matching method using Geographic Information System. The scoring used on regional advisability parameter (land advisability parameter) referring to SNI 03-3241-1994 and land suitability parameter (land elimination parameter) referring to SK SNI -11-1991-03. Those parameter then overlaid to obtain total score which used to determine land suitability classification. This scoring output then adjusted using matching method with “Rencana Umum Tata Ruang” of Sleman Regency to obtain the most appropriate location as FWDF site.

The result showed that there are 6 sites appropriate for FWDF development site. The first site located in Sumberharjo Village with area of 21.83 Ha, the second site in Wukirharjo Village (4.86 Ha), the third site in Madurejo Village (5.46 Ha), the fourth and fifth site in Sambirejo Village with area of 5.03 Ha and 1.39 Ha. The last site located at the border of Sambirejo and Madurejo Village with area of 3.28 Ha. The most appropriate site is the first site in Sambirejo Village. This site has the widest area compared to five other site, landuse is mainly as moorland or ricefield, and land ownership status are government-owned land. Other advantage is according to “RUTR” map of Sleman Regency 2009-2029 there was FWDF site plan in this area.

Keywords: Physical land carrying capacity, Final Waste Disposal Facilities, land suitability