Analyse of land damage cause sirtu mining in Ngoro subdistrict region Mojokerto regency by using remote sensing method and geographic information system

Nama Mahasiswa : Hardiawan Wicaksono
NRP : 3506 100 044
Jurusan : Teknik Geomatika FTSP-ITS
Dosen Pembimbing : DR. Ir. Muhammad Taufik

Abstract

Exploitation activity of mineral resources or digging material are one of development factors as physically, economic, and social. On the other hand, activity of development mining rapid in the region as directly and indirectly had been changing land shape which was significant in order it can cause degradation of environment. The holes which was former mining and opening fertile land layer when mining could caused fertile region becoming infertile land and needing long time to back normal condition. So, it was needed mapping of land damage especially in mining region Ngoro Subdistrict, Mojokerto Regency.

Remote sensing Technic and Geographic Information System were used mapping land damage in large region with the cost cheaper than terestris survey. Determination region of land damage was made base on several of paramaters such as vegetation cover, thickness land and sloping land. Map of land damage in Ngoro Subdistrict Mojokerto Regency was source of Aster image data 2009 and it was processed using ER Mapper software and Arc View 3.3

The result of research gave information about the level of land damage in mining region in Ngoro subdistrict Mojokerto Regency which were divided 5 classes such as undamage was
about 3,615 Ha, medium of damage was about 173,255 Ha, potential of damage was about 53,668 Ha, Damage was about 395,249 Ha and Very damage was about 131,076 Ha.

Keyword : Aster Image, Land damage in the mining region, Remote sensing and Geographic Information System.