



## **KOMUNITAS MIKROARTHROPODA TANAH PADA LAHAN BEKAS PENAMBANGAN PASIR**

**Oleh : Sri Sumarmi**

### **INTISARI**

Penelitian mengenai komunitas mikroarthropoda tanah dilakukan di lahan bekas penambangan pasir di Desa Balerante, Klaten, Jawa Tengah. Dalam penelitian ini dipilih enam lokasi lahan bekas penambangan pasir. Pengambilan sampel dilakukan lima kali pada bulan Juli sampai Agustus 2007, masing-masing dengan lima ulangan. Keenam lokasi tersebut adalah lahan alami yang belum pernah ditambang, lahan bekas penambangan yang dibiarkan saja selama 2,5 tahun, lahan bekas penambangan yang ditanami sengon dan rumput umur 1,5 tahun, lahan bekas penambangan yang ditanami sengon dan rumput umur 2,5 tahun, lahan bekas penambangan yang ditanami sengon dan rumput dan diberi pupuk kandang umur 1,5 tahun, serta lahan bekas penambangan yang ditanami sengon dan rumput dan diberi pupuk kandang umur 2,5 tahun.

Mikroarthropoda tanah dikoleksi dengan menggunakan bor tanah dan diekstraksi dengan corong Tullgren. Mikroarthropoda yang telah dikoleksi diidentifikasi di laboratorium dan dianalisis dengan ordianasi dua dimensi.

Hasil penelitian menunjukkan bahwa penambangan pasir berakibat menurunkan keanekaragaman, kelimpahan serta stabilitas komunitas mikroarthropoda apabila lahan bekas penambangan dibiarkan begitu saja. Namun apabila lahan bekas penambangan segera ditanami tidak berakibat demikian. Lahan bekas penambangan yang ditanami sengon dan rumput ditambah pupuk kandang umur 2,5 tahun mempunyai keanekaragaman famili, jumlah individu serta stabilitas komunitas paling tinggi. Umur penanaman berperan sangat penting terhadap terjadinya pemulihan lahan bekas penambangan pasir. Penambahan pupuk kandang dapat mempercepat terjadinya pemulihan komunitas. Membiarkan lahan bekas penambangan begitu saja memperlambat proses pemulihan.



## SOIL MICROARTHROPODS COMMUNITY AT SAND MINING SITES

By : Sri Sumarmi

### ABSTRACT

Study on the microarthropods community at sand mining sites was conducted at extensive sand mining in Balerante, Kemalang, Klaten, Central Java Province. There were six sand mining sites selected and sampled five times, on July 2007 up to August 2007. The sites were undisturbed field (as control), 2.5 years unrehabilitated site, 1.5 years rehabilitated site (planted by *sengon* /*Paraserianthes falcataria* and grasses without dung), 2.5 years rehabilitated site (by *sengon* and grasses without dung), 1.5 years rehabilitated site (by *sengon* and grasses with dung), and 2.5 years rehabilitated site (by *sengon* and grasses with dung).

Soil microarthropods were collected by soil sampler and extracted by Tullgren funnels, were then identified in laboratory. The data of communities were analyzed by two dimensions ordination.

Results of the study revealed that sand mining reduces of diversity, abundance, and stability of microarthropods community. Whereas the rehabilitated sites (by mean of planting *sengon* and grasses) facilitated the development of the community. Even 2.5 years rehabilitated site by *sengon* and grasses with dung increase diversity, abundance, and community stability. Apparently rehabilitation and time could play greater influence to the achievement of communities stability at sand mining sites. Leaving the unrehabilitated sand mining as bare land could lengthen the rehabilitation period.

**Keywords :** *microarthropod community, sand mining sites, rehabilitation*