

**STUDY ON SOIL FERTILITY RESTORATION IN OVERBURDEN DUMPS
THROUGH BIOLOGICAL MEANS IN BASTACOLA OPENCAST MINE, JHARIA
(JHARKHAND) COALFIELDS**

Thesis submitted to Vidyasagar University on partial fulfilment for the requirement for the

award of the degree of

Doctor of Philosophy in Science

Submitted by

CHITRALEKHA SENGUPTA

Department of Botany and Forestry

Vidyasagar University

Midnapore-721102

West Bengal, India

&

Central Pollution Control Board,

(Under Ministry of Environment Forest and Climate Change)

Eastern Zonal Directorate, 1582 Rajdanga Main Road,

Kolkata-700107, West Bengal, India

2018