

Potential of coir fibres as soil reinforcement

ABSTRACT

This paper presents an evaluation of the alternative use of natural cellulose coir fibres for soil reinforcement. Soil reinforcement is defined as a technique to improve the engineering properties of soil. Inserting natural fibres into the soil has been proposed as a reinforcement method. Randomly distributed coir fibre reinforced soils have recently attracted increasing attention in geotechnical engineering due to their strength. Furthermore, there is a need to develop an innovative and sustainable pre-treatment method to improve the effectiveness and performance of coir fibre as soil reinforcement. The primary purpose of this paper is, therefore, to review the characteristics, benefits, applications and weaknesses of coir fibre as soil reinforcement.

Keyword: Coir fibre; Fibre treatment; Soil reinforcement; Sustainable material