

實驗水道中土壤沖刷反應研究

林鎮洋, 陳湘媛, 邱俊文

景觀建築學系

建築與規劃學院

sharon@chu.edu.tw

摘要

This study was carried out in an experimental flume. Firstly, to investigate the eroded response of a bared riverbed with different flow velocities. Next, to compare the outcome with a planted riverbed for examining the tolerant limitation and flow resistance mechanism of the riverbed. Therefore, the role of vegetation in protecting the riverbed and streambank can be examined. The purpose of this study is to handle the dredging technologies correctly as well as to provide reference data when design and construct for the riverbed and streambank. The experimental flume was constructed with transparent acrylic panels and separated into control group and experimental group with different flow velocities. The results showed that the algal mats would form automatically and played a role in topsoil protection especially for the silt. It also indicated that the vegetated channel formed the algal mats slower than the bare soil channel. The mechanisms about how plants protect the topsoil from erosion and enhance the flow resistance was also been confirmed in this experiment.

關鍵字 : Keywords: Experiment Flume, Ecological Engineering, Streams rectification, riverbed, vegetated channel.