

PRELIMINARY RESULTS OF PILOT STUDIES ON THE USE OF VETIVER GRASS FOR MINE REHABILITATION IN CHILE

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Abstract:

A series of pilot studies were conducted at a number of copper mines in the northern and central regions of Chile. The objectives are to: determine whether vetiver can grow on highly contaminated copper waste rock and tailings; find out whether vetiver can grow on these extreme climatic conditions: high altitude, cold and wet winter, very hot and dry summer; ascertain whether vetiver is effective in stabilising the tailings ponds wall (built with copper tailings material only) and waste rock dump against wind and water erosion; determine whether vetiver is effective in preventing wind and water erosion in fresh and old tailings ponds. Results to date are very encouraging; vetiver could be established on both highly contaminated copper tailings dump and waste rock, where it grew to 1.5m in 6 months. Reasonable growth was also observed at a 2 500m altitude site.