LANDSLIP CONTROL MECHANISM BY VETIVER

Vetiver hedgerows

Vetiver roots

slipping zone on slopes usually 0~2 m depths





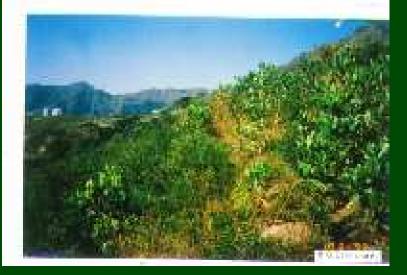


This drainage line in Fiji has been stabilized with vetiver for more than 30 years. It used to be barren and gullied





Hong Kong - Kowash, Astro, valve, becomes and Astro, morgmonod on heavily worked provide suffice on his behad aroon. Bub diffusions for your shar towarment. Photo while 6.6 doesn



Degraded hill park in Hong Kong was planted to vetiver and Gmelina trees. The result was startling. Vetiver hedgerows acted as a pioneer system that improved soil moisture by reducing runoff on these steep hillsides. Native species colonized the slope between the hedgerow and the trees grew very well. This is typical of what Vetiver Systems will do.





A common feature in many West African countries is the occurrence of enormous gullies (ravines) that are cutting back into urban areas. IN the Congo (DRC) this huge gully was cutting back into the city of Kikwit. With the support of USAID and The Vetiver network a community project was undertaken with the local people reshaping the gully and planting it to vetiver. Top left - a huge gully near Kinshasa, the home owner had planted a little vetiver which gave some protection. Bottom - a panorama view of the reshaped gully. Top center - planted with vetiver. Top right the gully well covered 4 months after planting.





Five years previously this land was heavily eroded pineapple plantation in Thailand. With the help of vetiver it has been rehabilitated into open parkland. Note in top right how native grasses are growing vigorously in the silt deposit behind the hedgerow where the man in the white shirt is standing



This bauxite mine tailings in Venezuela were rehabilitated using Vetiver System by a local environmental cooperative. Native species will colonize between the vetiver rows. This is a typical point source site for sediment and toxic leachates that if not for vetiver would end up in down stream drainage





This orchard land near Santa Barbara, California was sliding down the hill. The engineered system was not working, . Vetiver was and the slide was halted. The owner rates vetiver at A+++





This College campus in south China was in need of land rehabilitation. Vetiver System was applied (top right). The two bottom photos show how the landscape has been protected and stabilized and how native plants have colonized the vetiver



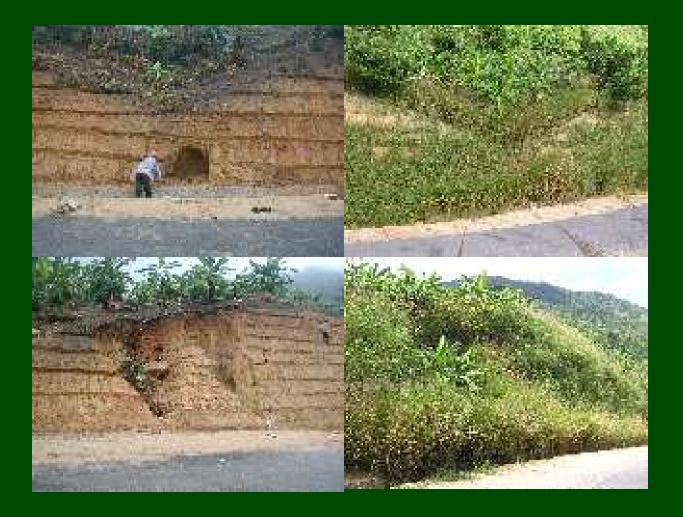




Trial of Vetiver grass for protecting sand dunes in Quang Binh. Establishment of the demo site.

The sand dune is fully stabilized after one year, favoring the growth of other trees.

THE VETIVER NETWORK





A degraded slope in Vietnam. Before treatment (left), two years later (right) THE VETIVER NETWORK INTERNATIONAL



Slopes like this (left) on the Ho Chi Minh highway can be stabilized successfully with Vetiver (right). If the slope on the left is not stabilized it will slide. This is typical of land slides that occur after steep slopes have been cultivated. Vetiver can be used to protect and stop future slides



With its special and unique characteristics as presented above, Vetiver grass can replace and/or combine with other trees and other local grasses etc. forming a closed hedgerow to help reduce many types of natural disasters;

Vetiver grass is a very cheap alternative, costing only about 10-20% of other traditional methods;

At the same time, it is also very effective and easy to use, so that it can be used by local communities;

More importantly, in contrast to all rigid, structural methods, which deteriorate with time, as a living bio-engineering method, Vetiver grass improves its effect with time. It is an environmental friendly method.

