VETIVER SYSTEM FOR

RIVER AND STREAM BANK EROSION CONTROL
Principles of the Vetiver System for River Bank Stabilisation

In flood erosion control and riverbank stabilisation the VS uses the deep and high tensile root system to reinforce the bank slopes and its dense and stiff stems to spread and reduce flow velocity.

• To stabilise the bank steep gradients, horizontal rows planted on approximate contour lines

• To reduce flow velocity of the strong current therefore preventing scouring from the strong flow, planting of cross rows is needed.

• For maximum effect, the cross rows are orientated at right angle to the flow direction.

• The spacing of both horizontal and cross rows varies with slope gradient and length, soil type, flow velocity and depth.
AUSTRALIAN WORKS BY
P. TRUONG
PLANTING ON THE BANK OF A SMALL RIVER
SEVEN MONTHS AFTER PLANTING
No sign of erosion following release, very stable banks
NINE MONTHS AFTER PLANTING

Vetiver
ONE YEAR AFTER PLANTING

Vetiver
Severe erosion on the abutment of a bridge in Queensland.
Planting layout
ONE MONTH AFTER PLANTING
TWO YEARS AFTER PLANTING DURING WINTER
FOUR YEARS AFTER PLANTING
FOUR YEARS AFTER PLANTING
VETIVER PLANTING ON A MARINE TIDAL RIVER BANK
NOTE THE SEA WATER MANGROVE ESTABLISHED NEXT TO EIVER, SHOWING ITS HIGH LEVEL OF SALT TOLERANCE
VETIVER SYSTEM FOR
RIVER AND STREAM BANK EROSION CONTROL IN OTHER COUNTRIES
Malaysia: An outstanding success, several floods did not damage this river. Photo Credit Diti Hangchaovanich
Philippines: Vetiver was planted to protect the bank of Abra River against flood erosion. Photo Credit Edwin Balbarino
One year after planting, the bank was successfully stabilised.