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

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PLANTING ON THE BANK OF A SMALL RIVER

SEVEN MONTHS AFTER PLANTING


23 5 2001

NINE MONTHS AFTER PLANTING

ONE YEAR AFTER PLANTING

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

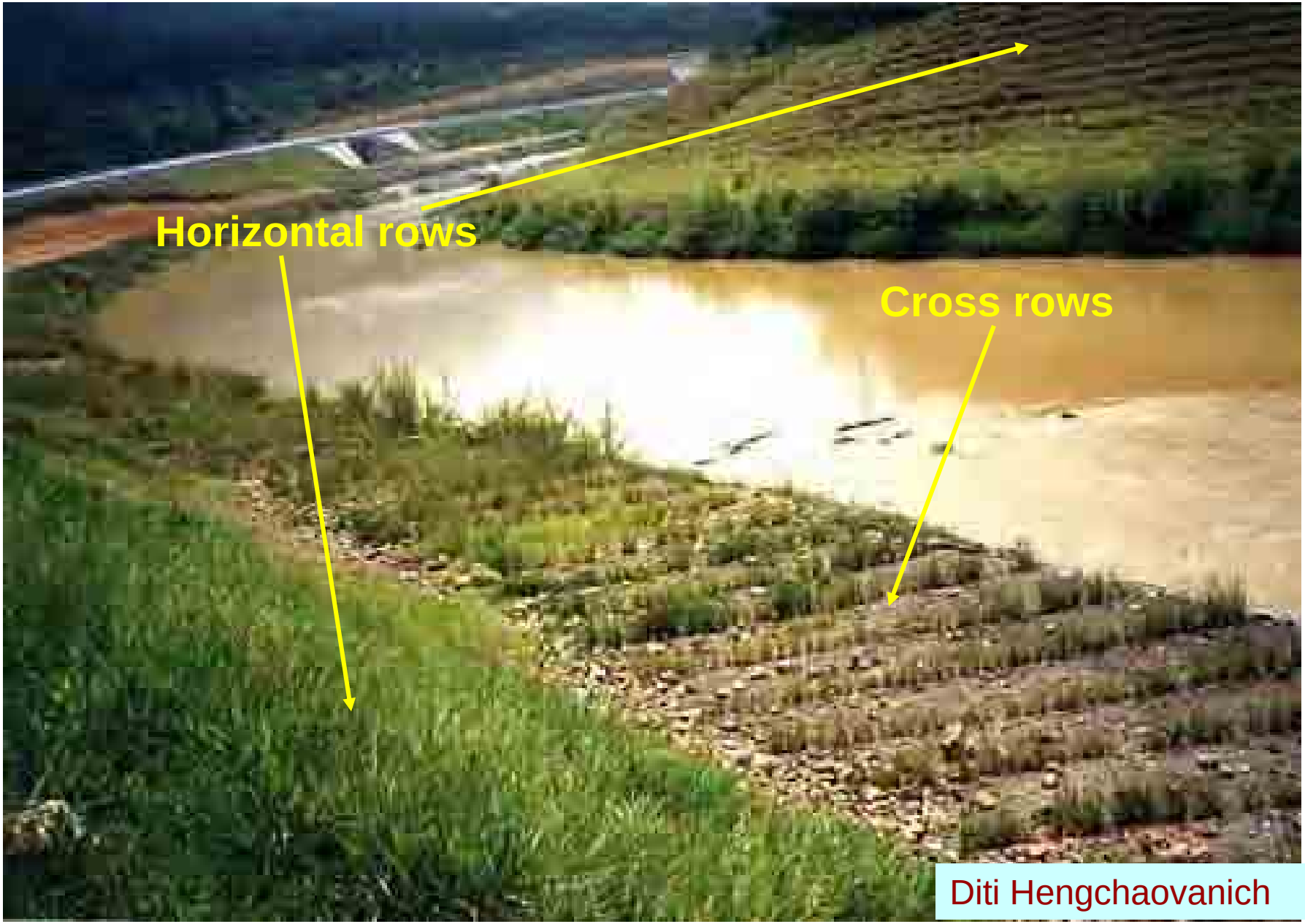
NOTE THE SEA WATER MANGROVE ESTABLISHED NEXT TO EIVER, SHOWING ITS HIGH LEVEL OF SALT TOLERANCE

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