VETIVER SYSTEM TECHNOLOGY FOR DAM WALL PROTECTION

Dr. Paul Truong
Veticon Consulting
Brisbane, Australia
<p.truong@Veticon.com.au>

All materials in this document remain the property of Veticon Consulting Pty Ltd. Permission must be obtained for their use. Copyright © 2018
Deep, extensive and penetrating root system

**Thailand:** One year old with 3.3m deep root system. These roots have a tensile strength equivalent to 1/6 mild steel reinforcement.

**Australia:** One year old, 1.3m and root bound.
Soil stabilisation mechanism by vetiver

Vetiver hedgerows

Vetiver roots

Slipping zone on slopes usually 0~2 m depths

Diti Hengchaovanich
DAM WALL STABILISATION

Dam wall repaired after cyclone damage
There are 3 terraces on this wall, each about 50m high
Compactor used to consolidate top soil
Long arm excavator to prepare ledges for planting
Ledges ready for planting
Three weeks after planting, watered by long arm water trucks
Six weeks after planting
Six weeks after planting on 3 terraces
One year after planting
Two and half years after planting
PROTECTING INSIDE WALL FROM WAVE EROSION
Planting at the high water mark on the wall of a 40ha dam subjected to strong wind during monsoon season.
Good establishment after 3 months
Growing vigorously in water on a dam wall in north Queensland.
Mature vetiver on inside wall during dry season
Mature vetiver on inside wall during dry season
Eroded inside wall before vetiver planting. It is now fully protecting from waves action when full.
Mature vetiver on inside wall during dry season
Waves erode unprotected inside wall.

Eroded inside wall before vetiver planting.
DAM WALL STABILISATION

China, South Africa, Portugal
Guangdong, China
Portugal