MSETO ENVIROMENTAL GROUP --- VOI, KENYA

# VETIVER GRASS APPLICATIONS IN KENYA

PAUL MWADIME KOMBO'S COMMITMENT TO THE USE AND PROMOTION OF VETIVER GRASS TECHNOLOGY

THIS PRESENTATION RECORDS SOME OF PAUL MWADIME KOMBO'S WORK WITH VETIVER GRASS IN KENYA SINCE THE LATE 1990'S. DURING THAT TIME LOCATED AT VOI (NEAR THE FAMOUS TSAVO NASTIONAL PARK) HE HAS BECOME KENYA'S PRIMARY PRODUCER OF MARKETABLE QUALITY VETIVER GRASS AND HE, WITH HIS ENVIRONMENTAL GROUP "MSETO", HAS APPLIED THE VETIVER SYSTEM FOR ON FARM SOIL AND WATER CONSERVATION, INFRASTRUCTURE PROTECTION, RIVER BANK STABILIZATION, AND OTHER APPLICATIONS. IMPORTANTLY HE DEVOTED A LOT OF HIS TIME IN TRAINING FARMERS, STUDENTS AND COMMUNITY GROUPS IN MANY PARTS OF KENYA.

HE IS PROUDLY ACKNOWLEDGED AS KENYA'S KING OF VETIVER, AS HE HAS BEEN A KEY SUPPLIER OF VETIVER PLANT MATERIAL TO MANY OF THE EVER GROWING NUMBER OF VETIVER USERS IN KENYA



IMAGE OF VETIVER
GRASS ROOT SYSTEM
(Senegal)

### VETIVER SYSTEM FARM APPLICATIONS

### VETIVER CONTOUR HEDGEROWS FOR ON-FARM SOIL AND WATER CONSERVATION

Vetiver Grass Technology stabilizes a water pan in a semi-arid area of Kenya





### On Farm application of Vetiver Technology at Voi







On farm soil and water conservation using the Vetiver System



### On Farm application of the Vetiver system





Vetiver Grass Technology stabilizes this farm, reduces erosion, reduces rainfall run-off and results in bumper crops of tomatoes.



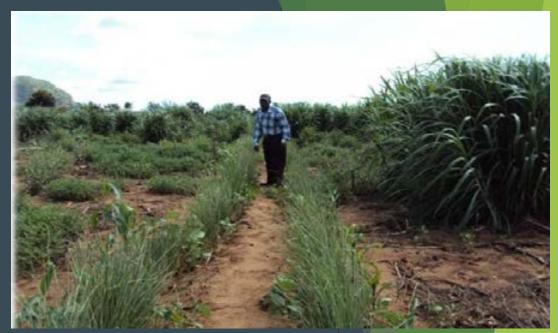


Note: there is anacedotal reports that vetiver grass reduces nematode damage in tomato crops

#### Examples of on farm vetiver hedgrows

Vetiver field boundary hedges. The double row hedgerow at the bottom right when mature should be a barrier to livestock! Potentially thick hedges can also be used to reduce unwanted pesticides and other chemicals moving between farms.







German Alpine goats enjoy vetiver grass as a forage available at Paul Kombo's nursery



# TRAINING AND PROMOTION TO COMMUNITIES, STUDENTS AND INDIVIDUALS

### Paul Kombo training farmers in Western Kenya - Nyanza Province - in the Vetiver System (September 2009)







### Preparing a Vetiver nursery



Paul Kombo training farmers in Western Kenya - Nyanza Province - in the Vetiver System (September 2009)





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Nursery development for vetiver propagation

Paul Kombo promoting Vetiver Grass Technology at an ASDAP launched by the Governor Taita Taveta County om May 22, 2013, and at World Environmental Day (2013) at South Coast Diani Estate





### Training Farmers in Vetiver Technology in Machakos Kenya





#### Kenyatta University Students studying Vetiver Grass Technology at Paul Kombo's nursery at Voi (2011)

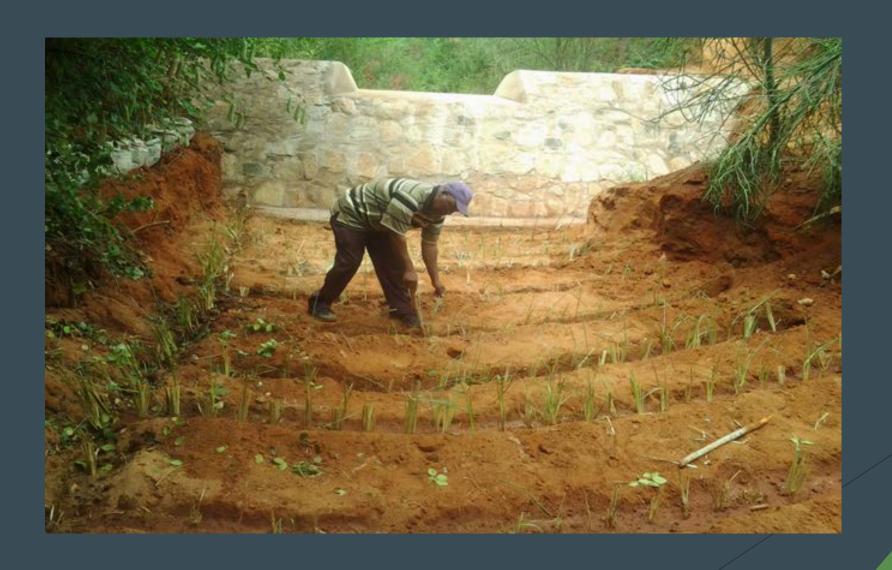


### Agricultural Field Day - Vetiver Grass Demonstration



# VETIVER SYSTEM WATER RELATED APPLIUCATIONS APPLICATIONS

# VETIVER GRASS FOR STABILIZING CHECK DAM OUTFLOW CHANNELS



## RIVER BANK STABLISATION. Voi River at Voi, Kenya.



Above newly planted Vetiver. Right: mature Vetiver that has stabilized the bank and adjacent land. A community effort.





#### River bank stabilization with Vetiver Grass Technology on the Voi River





#### FISH POND STABILIZATION USING VETIVER GRASS





The hedgerows also help reduce sediment and other contaminates from entering the pond

# VETIVER SYSTEM INFRASTRUCTURE APPLICATIONS

Vetiver System used to control rainfall runoff on a steep slope - part of a school compound - Kenya



Protection of steep bank at "high-end" residential community at Kilifi, Kenya, using Vetiver grass as bioengineering technology



Bottom right: Note: earlier planted vetiver at left end of slope





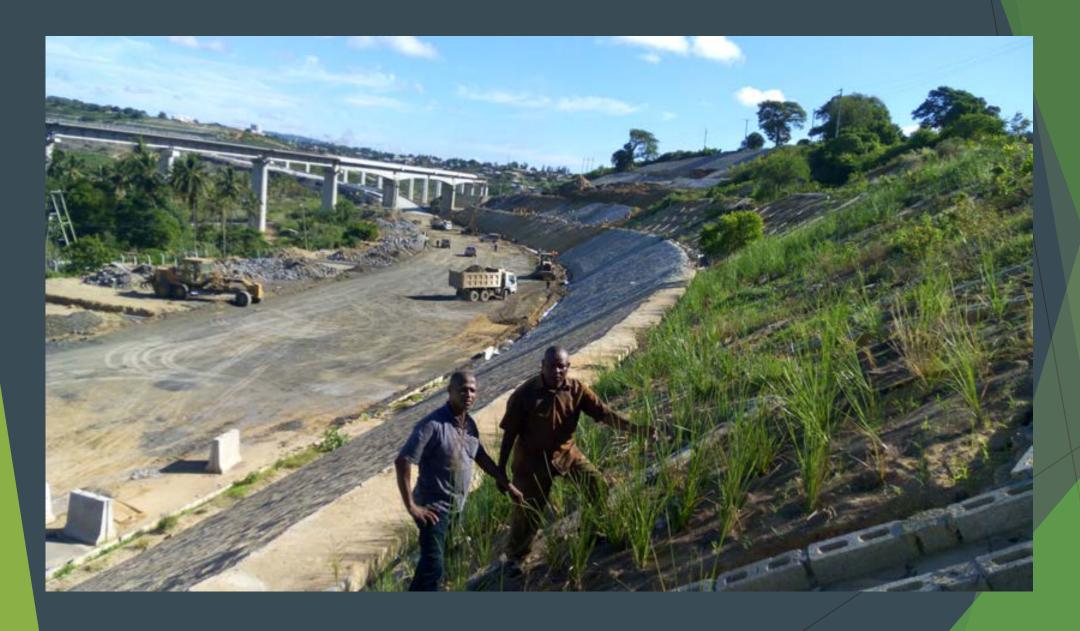
### Planting Vetiver grass on Chinese constructed highway batters adjacent to Mombasa Airport.



The concrete "chevrons" are commonly used in Chinese designs to protect highway/railroad batter and fill slopes. Unless reinforced with a deep rooted vegetation, the structures sometimes collapse. Vetiver provides excellent stability.



#### Planting on Chinese constructed highway batter adjacent to Mombasa Airport



### **VETIVER SYSTEM FOR LANDSCAPING**



Located at Voi, Kenya



### **VETIVER GRASS PROPAGATION**

### Vetiver Slip Production at Paul Kombe's well established nursery at Voi.

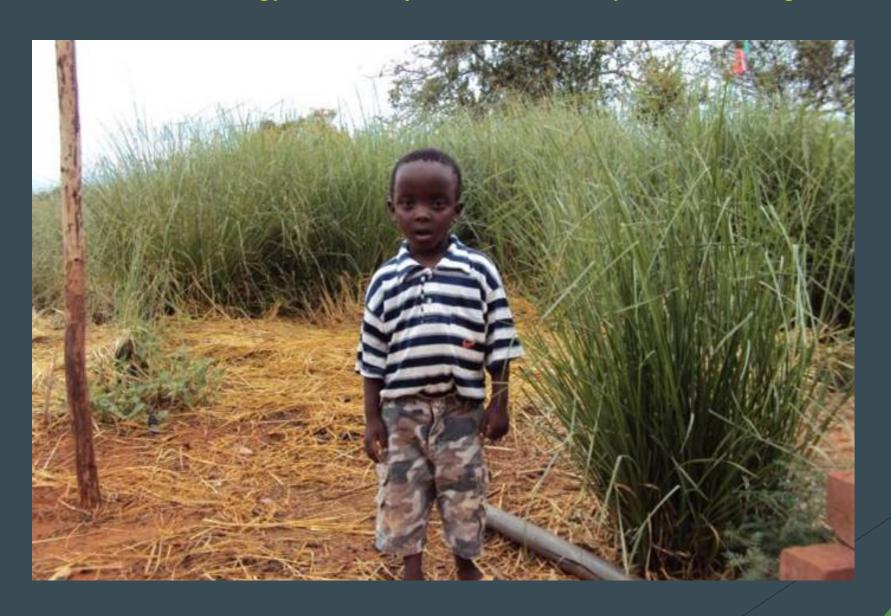
Bottom left: Good quality nursery plants. Top right: preparing vetiver plants for sale. Bottom right: Loading vetiver plant material on the farm truck for delivery to the client







#### Vetiver Grass Technology will help this small boy have a bright future



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