



The Vetiver Network International

La Plantation Bemasoandro SARL

Vetiver System Applications in Madagascar for Sustainable Development

**SECOND LATIN AMERICA INTERNATIONAL
CONFERENCE ON VETIVER SYSTEM (LAICVS2)**

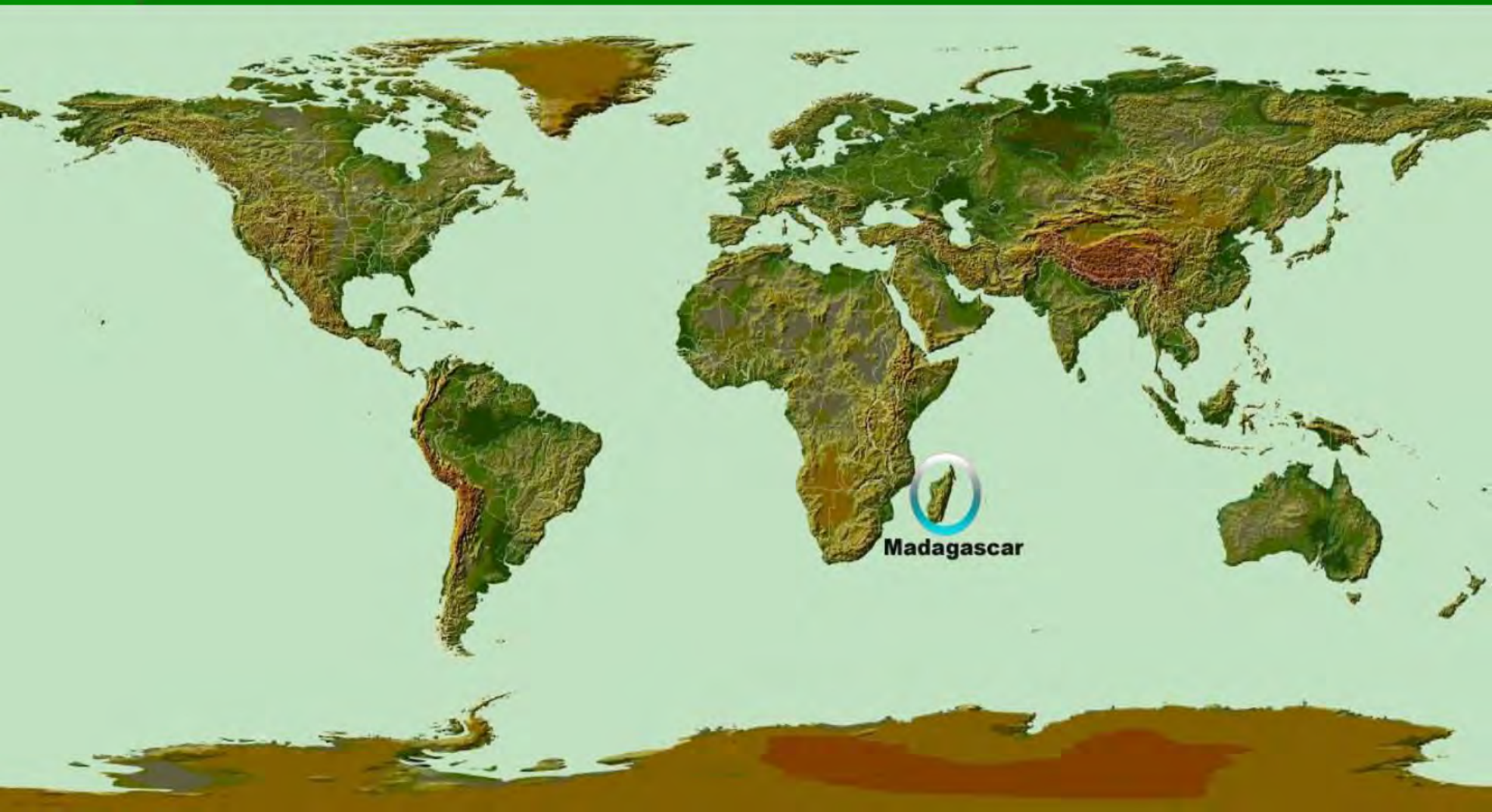
3 to 5 October 2013

***“Vetiver System: Green Consciousness for
Sustainable Development”
Medellín-Colombia***

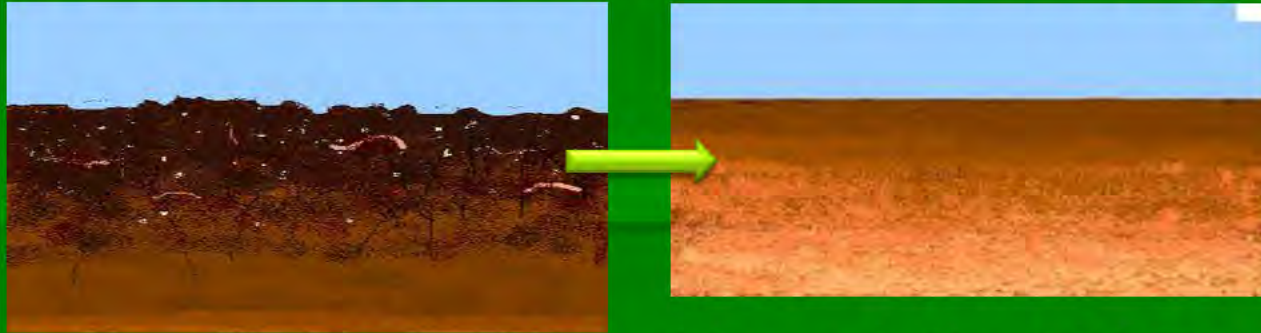
***Yoann Coppin, CEO La Plantation Bemasoandro,
TVNI SENIOR TECHNICAL ADVISOR, country
coordinator for Madagascar***



Madagascar, island of high biodiversity



Environmental context



-3000T soil/ha is still cultivable, while 400T of soil/ha is washed away by erosion each year (according World Bank data)

-Slash and burn cropping is the traditional practice resulting in a severely deteriorated land

-90% of rainforest has disappeared

-More than 300.000 ha of land are burned each year



Erosion, gully erosion (lavaka) and sediments: severely degraded lands



Branche 3 (Ouest)

Branche 2 (Nord)

View from space of sediments washed away and carried by rivers

Sea

Land

Rivers



Field view of lavakas and its sediments washed away, carried by « sandy rivers »



25/08/2009

1-Vetiver System for sustainable agriculture and rainforest conservation



Agricultural practice and popularisation of VS use



Bare slope and erosion on slash-and-burn land for rainfed rice



Due to this practice, the loss of soil fertility is so high that the farmers have to clear a new parcel of land every year. The rainfed rice can not grow a second year on these severely eroded lands.



2-Vetiver System for flood and sediment impact alleviation



3-VS for infrastructures protection

The VS is applied as solution for many infrastructures protection such as:

- Roads and railways
- Hydro-agricultural infrastructures
- Pipelines, pylons,...
- Buildings and property
- Riverbanks, bridges
- Dune, littoral, etc...



**Vetiver
System
Application for
dyke's banks
stabilization:**

VS for banks protection

- 1) During the work**
- 2) Bank just planted**
- 3) After 6 months**
- 4) After 1 year**



VS for railway's slopes stabilization



VS for railway's landslides stabilization



Vetiver System Application for infrastructure stabilization (railway):
before/after the plantation's work



VS for railway's slopes stabilization





VS for railway's slopes stabilization

VS for GSM pylon's landslides stabilization



VS for pipeline's landslides stabilization



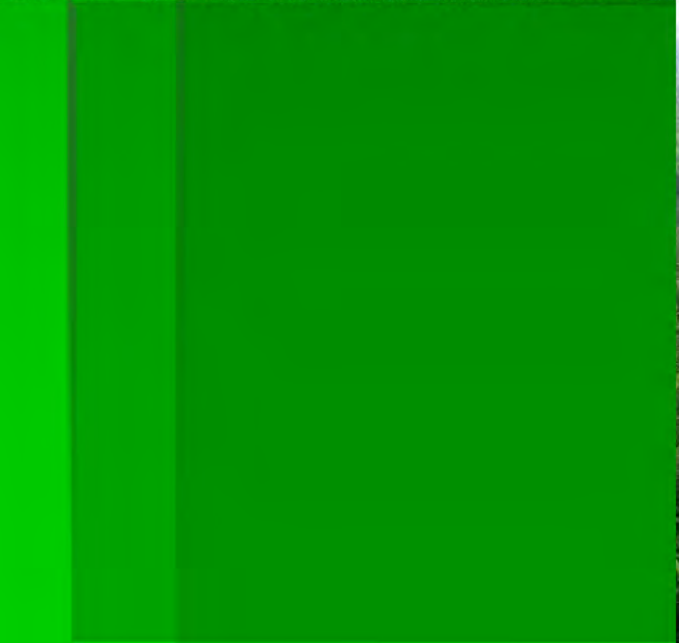
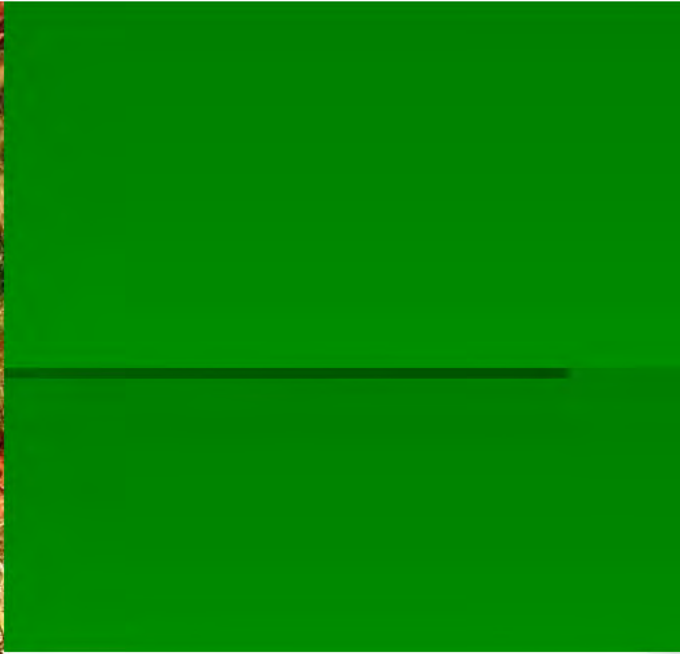
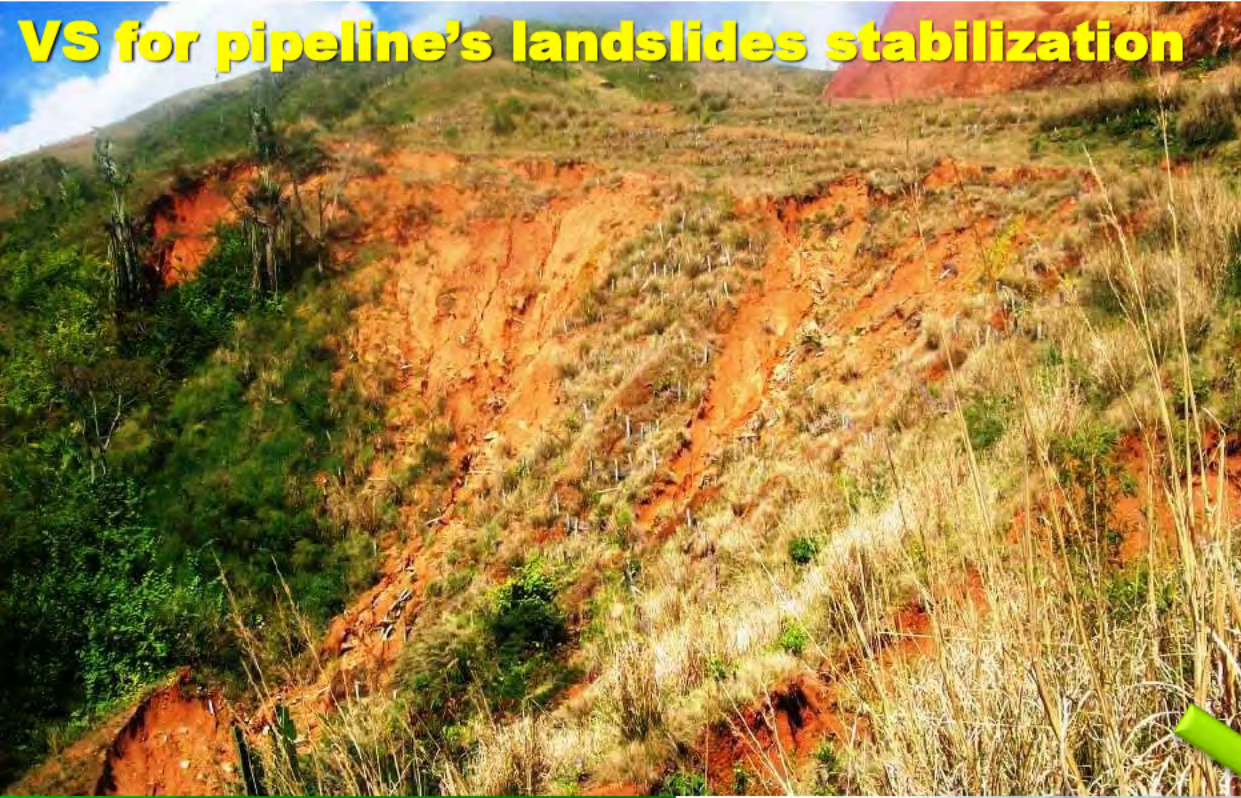
VS for pipeline's landslides stabilization



**VS for pipeline's
landslides
stabilization:
during the work**



VS for pipeline's landslides stabilization



VS for pipeline's landslides stabilization



VS for pipeline's landslides stabilization



Vetiver System for poverty alleviation



To sell the material plants, to produce and to propagate the Vetiver in nurseries are good opportunities for farmers. The way of management must be adapted to the poverty level.



Vetiver System training



Training in the field and in room, for propagation and plantation of Vetiver trough the « VHR » technique (« Vetiver-Hedge-Row »), strip of one meter long grown for 3 months in nurseries.

5-Vetiver System for waste water depollution

Antananarivo, with 2 million inhabitants, has no proper water treatment facilities. Thus, the water quality is very contaminated and highly polluted. During rainy season, floods, erosion, sediments generate many problems.



5-Vetiver System for waste water depollution



Vetiver Handicraft



Vetiver's other uses



- Fodder
- Roofing
- Handicraft
- Essential oil



Vetiver's nursery



Vetiver's roots crop





**Thank you
for your
attention**

