

Keynote Presentation

Vetiver Systems *On-Farm*: Soil & Water Conservation, Flood Protection and Other Benefits

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EXTENDED ABSTRACT

This paper discusses two main issues:

- The use of VS for on-farm soil- and water conservation, particularly in mountainous areas,
- The impact of several on-farm and other VS applications on rural livelihoods.

1. Farmers facing environmental challenges

Climate change

- heavier storms: erosion, landslides, flood damage to farms, dam siltation
- more droughts: longer dry spells, water infiltration decreased

Unsustainable farming

- on marginal lands, deforestation
- soil degradation (depletion, alkalisation)
- flood damage to crops
- water source depletion
- water pollution (agro-chemicals)

2. Farmers facing Problems

Crops lack water & fertility

- Africa: cereal yield is only a quarter of global average
- Machakos farmer: toughest challenge are regular **water supply** and pests
- Kenya fertilizer prices soared (**1700 → 6000 Ksh/bag**,
- Kenya land shortage causing conflict; chronic underproduction increases need for land

Soil & water lost to erosion

Other problems

- Kenyans have least access to safe water in East Africa: 647 m³ / citizen (Tanzania 3000, Uganda 2700)

- 75% of people in Kenyan hospitals would not be there if they had access to (safe) drinking water
- Pursuit of water prevents women to engage in productive activities, children to go to school

3. Solutions

- include smallholders in water & land management planning (equitable distribution)
- upscale Soil & Water Conservation programs to allow *sustainable* (intensification of) agriculture

4. Keys to success

- Making economic benefits *visible*
- **Participation**: farmers to test and adjust the package
- A **comprehensive or integrated approach**, offering a **package** of measures (incentives linked to *package* - not particular inputs)
- Promoting other beneficial uses of Vetiver (fodder, handicraft, pest control)
- **motivate** farmers, community, & extension staff *based on results*

Brief Introduction to the Speaker

Elise Pinners, Associate Director of TVNI, also consultant with 19 years experience in rural development (agriculture & natural resources). She started using Vetiver Systems in NW Cameroon in the late nineties. Since then she built up experience with VS, promoting it internationally, especially in Vietnam and Kenya.