

# Audit on Current State of Development and Practice and the Role of TVNI

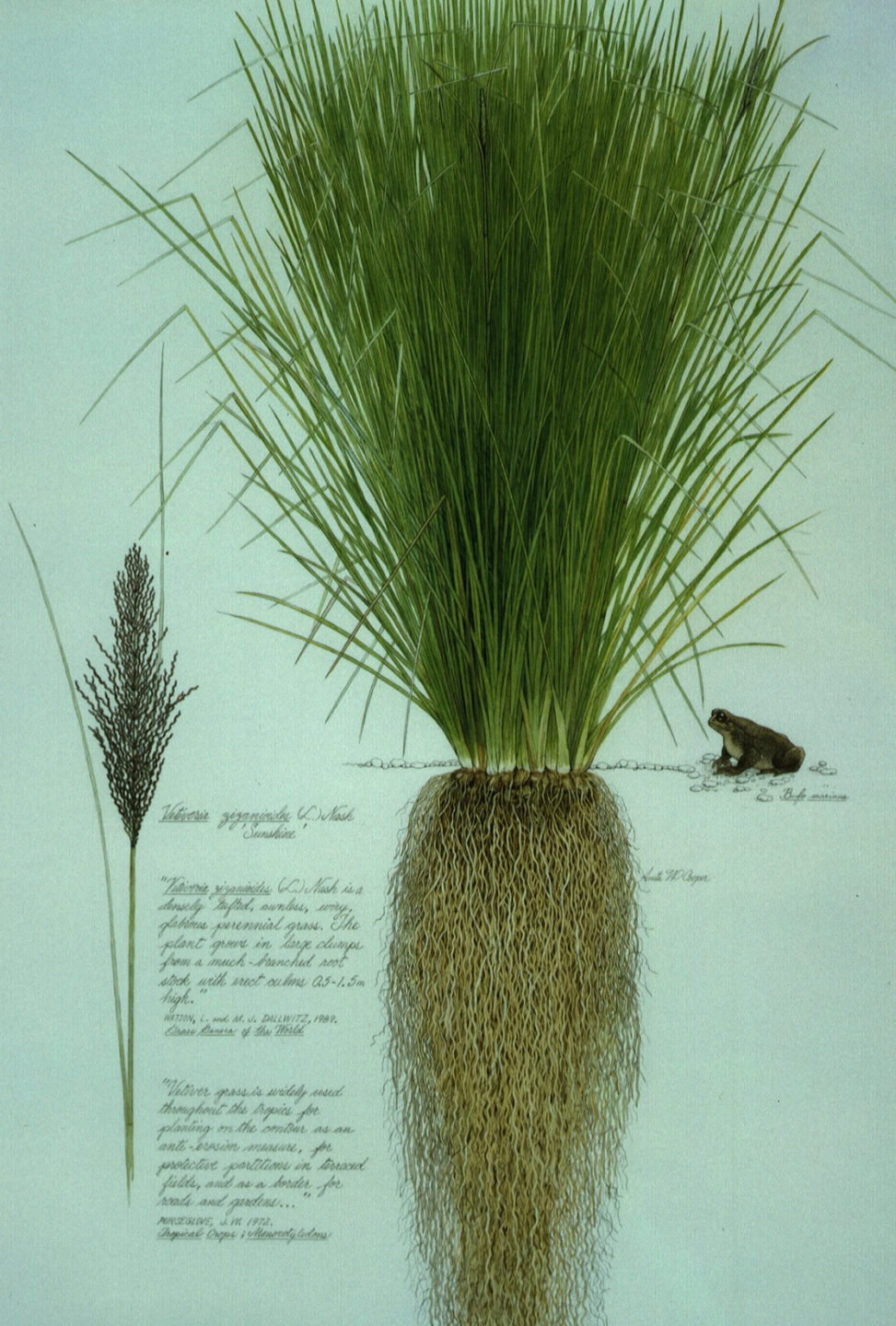
By

James W. Smyle and Richard G. Grimshaw, O.B.E.

THE 6<sup>TH</sup> INTERNATIONAL CONFERENCE ON VETIVER

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Da Nang, Vietnam



*Vetiver zizanioides* (L.) Nash  
Sumbawa

"*Vetiver zizanioides* (L.) Nash is a densely tufted, aromatic, woody, fibrous perennial grass. The plant grows in large clumps from a much-branched root stock with erect culms 0.5-1.5m high."

WATSON, L. and M. J. DALLWITZ, 1989.  
Check Species of the World

"Vetiver grass is widely used throughout the tropics for planting on the contour as an anti-erosion measure, for protective partitions in terraced fields, and as a border for roads and gardens..."

POWELLSON, J. H. 1972.  
Regional Crops & Agroecology

# An Ancient Technology

*“My beloved had a vineyard on a very fertile hill. He dug it and cleared it of stones, and planted it with choice vines...but it brought forth sour grapes...And now I will tell you what I will do to my vineyard. **I will remove its hedge, and it shall be eaten up....”***

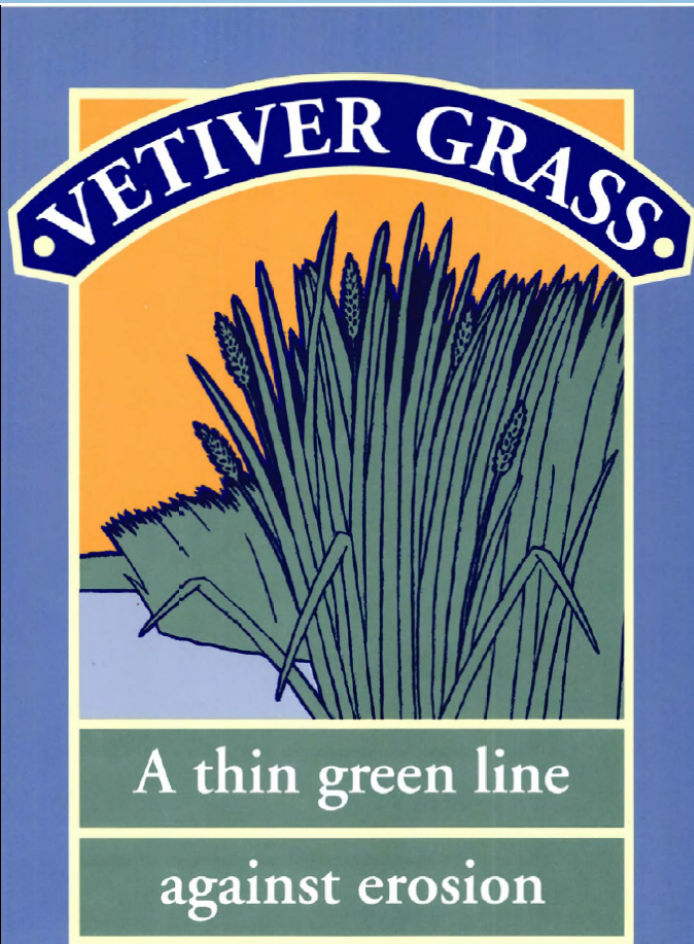
Isaiah 5:1-7

circa 700 B.C.

# “Modern” Vetiver

## Mid 1980s – World Bank

- India soil & moisture conservation programs fail using structural approaches
- Richard Grimshaw & John Greenfield introduce Vetiver hedgerows
- Greenfield used Vetiver in 1950s for hillside sugar cane production in Fiji



## **VETIVER GRASS**

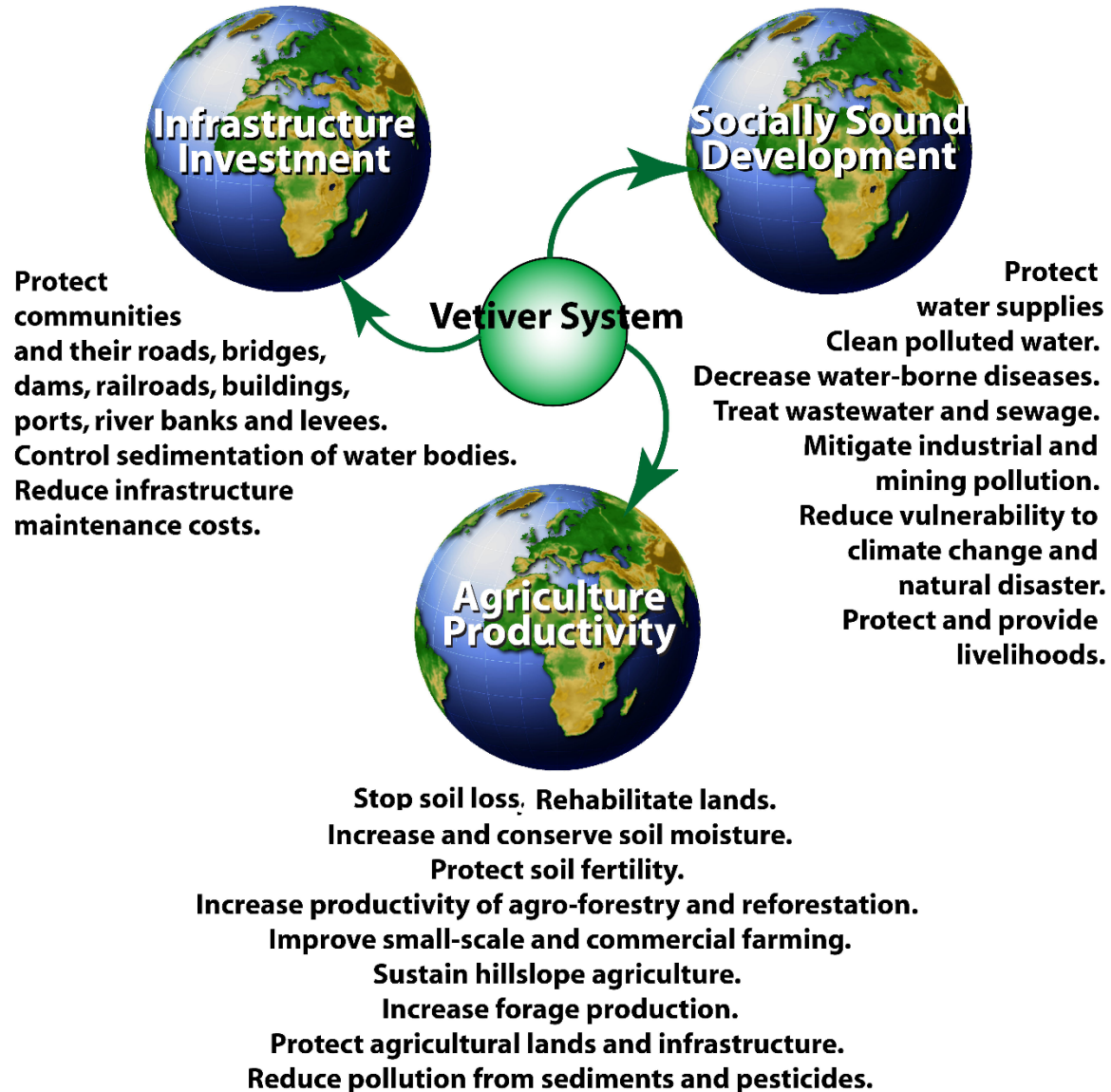
A thin green line  
against erosion

Board on Science and Technology  
for International Development

National Research Council

National Academy Press  
Washington, D.C. 1993

**The Vetiver System  
Organic “glue” to support  
sustainable development  
at all scales**

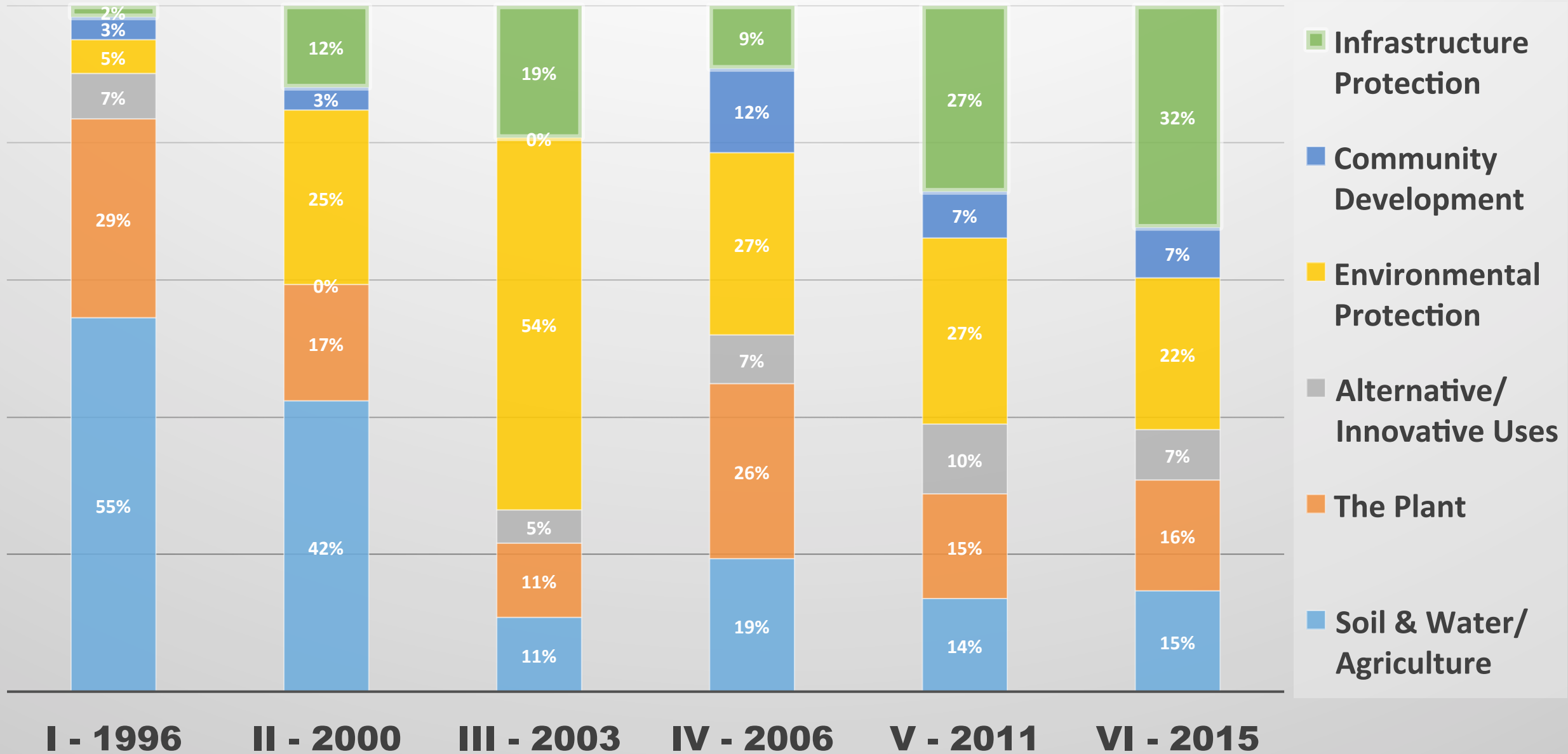


# 30 Years Later

- Broad range proven applications
- Global leaders: Thailand, CSOs, NGOs, individuals, companies & foundations
- Applications on all continents (incl. Europe & USA)
- Lacks broad support from formal systems of government, international development, research & technical assistance agencies (e.g., CGIAR, FAO)

# Changing Focus of VGT: ICV-1 to ICV-6

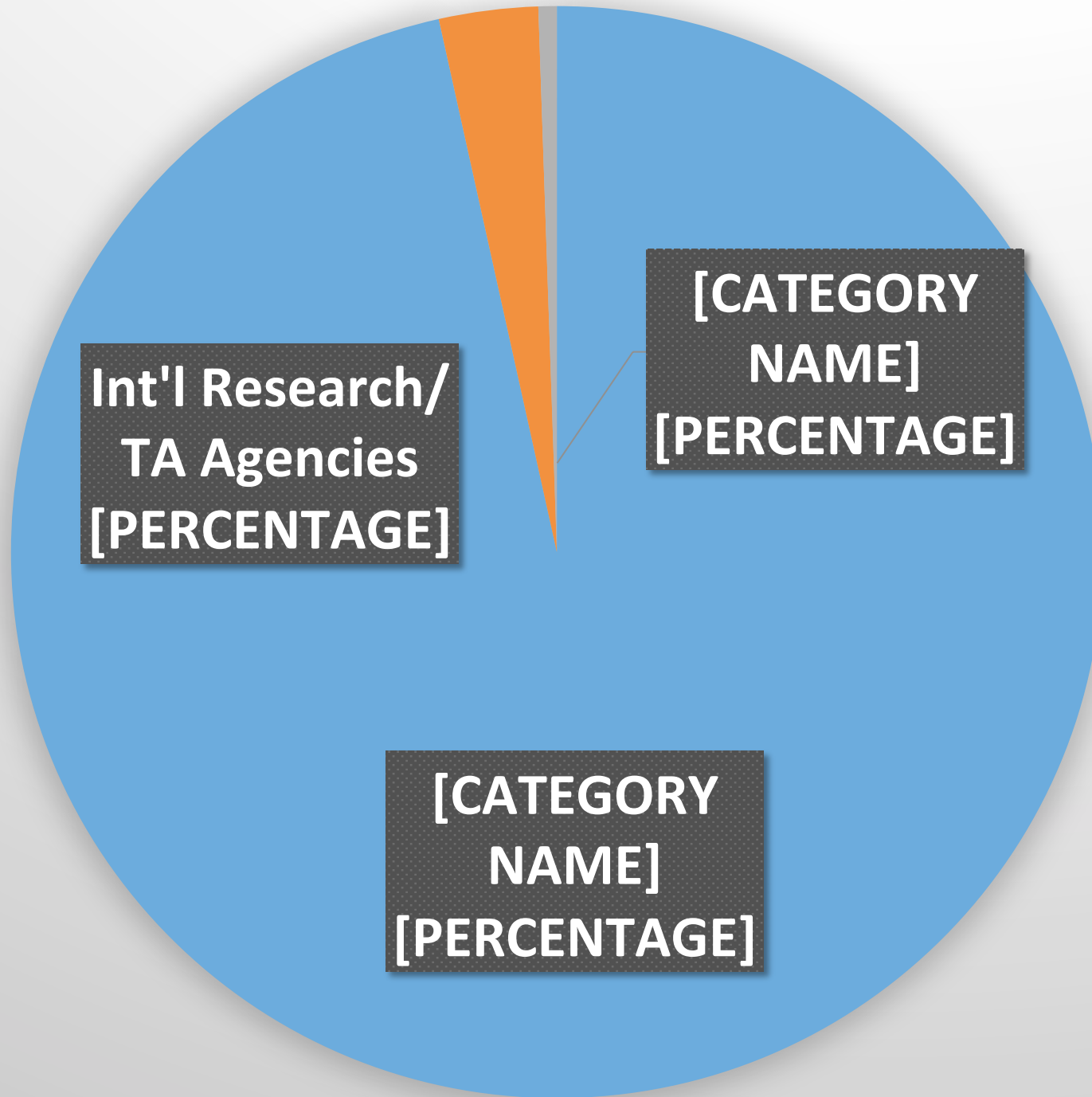
## Research/Application Areas & Their Relative Importance



# Meta-Analysis of Vetiver References

Source	Number of References by Thematic Area			
	Essential Oil	Ag Productivity	Socially Sound Development	Infrastructure
<b>Pre-1985</b>				
Academic & Technical	629	4	4	0
Int'l Research & TA Agencies	0	0	0	0
Multilateral Development Agencies	0	0	0	0
<b>1985 to 1993</b>				
Academic & Technical	288	113	2	2
Int'l Research & TA Agencies	0	1	0	0
Multilateral Development Agencies	0	0	0	0
<b>1994 to 2003</b>				
Academic & Technical	436	1,340	459	148
Int'l Research & TA Agencies	16	98	5	1
Multilateral Development Agencies	0	7	4	2
<b>2004 to 2013</b>				
Academic & Technical	1,462	3,564	714	608
Int'l Research & TA Agencies	5	105	2	0
Multilateral Development Agencies	2	18	5	3

# Reference Sources 2004 to 2013



■ Academic

■ Int'l Research/Technical Assistance Agencies

■ Multilateral Development Agencies

# Where Are We?

## ➤ Practitioners:

- Soil/water conservation & agricultural applications has declined greatly & community development has always lagged
- Focus on broader bioengineering and environmental management

## ➤ Academia:

- Very focused on agricultural productivity & land management...> 70%
- Socially sound development & bioengineering/infrastructure about equal, latter growing more rapidly

## ➤ Int'l agencies responsible for global efforts in rural poverty, sustainable dev., "climate smart" ag, community "climate proofing" & CC adaptation:

- **Almost total failure regarding attention to the Vetiver System**



# Where Is Attention Needed?

- Applications that can be “privately profitable” (e.g., bioengineering, phytoremediation, etc.) are doing fine...
- Applications that are “public goods” (e.g., poverty alleviation, community development, etc.) are not doing fine...

# Where Is Attention Needed?

## ➤ **Unmet promise:**

- Initial interest motivated by promise & potential for improving lives & livelihoods of the poorest, most economically marginalized populations: communities & households reliant upon rainfed agriculture.

## ➤ **Climate change:**

- On track to ensure worst case scenarios for climate change
- Imperative to build community capacity for CC adaptation & resilience
- Need “*effective, cross sectoral responses*” (World Bank, 2011)
- Communities studied (ibid.), issues: water quantity/quality; soil erosion & fertility maintenance; vulnerability to extreme weather events.
- Concerns (ibid.): water-related health issues, sedimentation of rivers, flooding, droughts, desiccation of wetlands, landslides, and damages to infrastructure.

# TVNI Strategy

- **VS internalized in int'l research/TA agencies, mainstreamed into multilateral development agencies**
  - Collaborate with CGIAR & other partners for global, independent, scientific & technical audit of VGT
  - TVNI seeking partners & funding (~ USD 0.5 million)
- **Support the development of a web-based, technical training program for VGT**
  - Essential if application of VS to be scaled up globally
  - Vetiver Institute Under development by group of young, entrepreneurial Colombians...next presentation

# TVNI Strategy

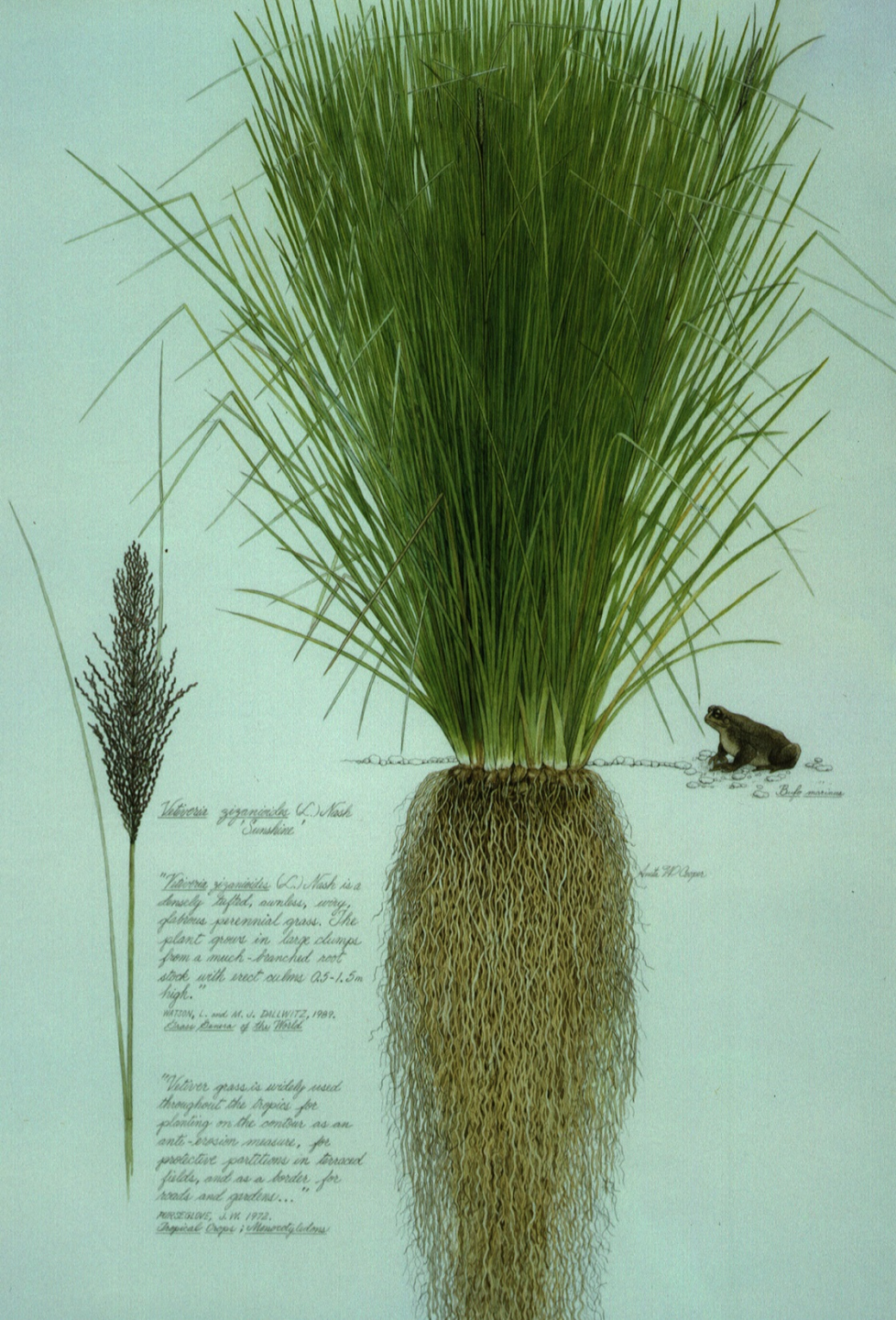
- **Promote establishment of a global M&E/tracking system for VGT applications.**
- Critical to have M&E capacity to understand outcomes; set priorities; develop strategies; make informed/rational judgements for promotion & operations.
- Great value-added for promotion, dissemination, networking, learning, fill knowledge gaps of scope/distribution of VGT around the world.
- Undoubtedly give rise to new & innovative opportunities that can only begin to guess about at this time.
- Concept for system courtesy of several individuals from the Thai Land Development Department....attend presentation of *Management And Monitoring Of Vetiver Grass Plantation In Thailand By Using Vetiver Grass Tracking System*
- TVNI will be seeking interested partners to develop global, smart phone-based system (upload coordinates, photos & simple information)

# TVNI Strategy

**Scientific audit:** Open door to VGT 's up-scaling & add to global toolbox for cross-sectoral response to CC adaptation thru global institutions

**Vetiver Institute:** Provide technical foundation (training) for global up-scaling

**Global tracking system:** Provide monitoring of up-scaling; strengthen field-level networking; facilitate knowledge sharing, cross-fertilization & learning



*Vetiver zizanioides* (L.) Nash  
Sensibilis

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Climatic Zones of the World

"Vetiver grass is widely used throughout the tropics for planting on the contour as an anti-erosion measure, for protective partitions in terraced fields, and as a border for roads and gardens..."

PERCECLOVE, J. H. 1972.  
Tropical Crops: Hortocyclopedia

# Thank You!