



The Vetiver Grass Cultivation Campaign and Promotion for Land Resources Rehabilitation in Thung Kula Rong Hai Plain: Case study in Chumphon-Buri District, Surin Province, Thailand

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5th – 8th May 2015, Danang City, Vietnam
The 6th International Conference on vetiver (ICV6)



☑ Introduction

☑ Objective

☑ Methodology

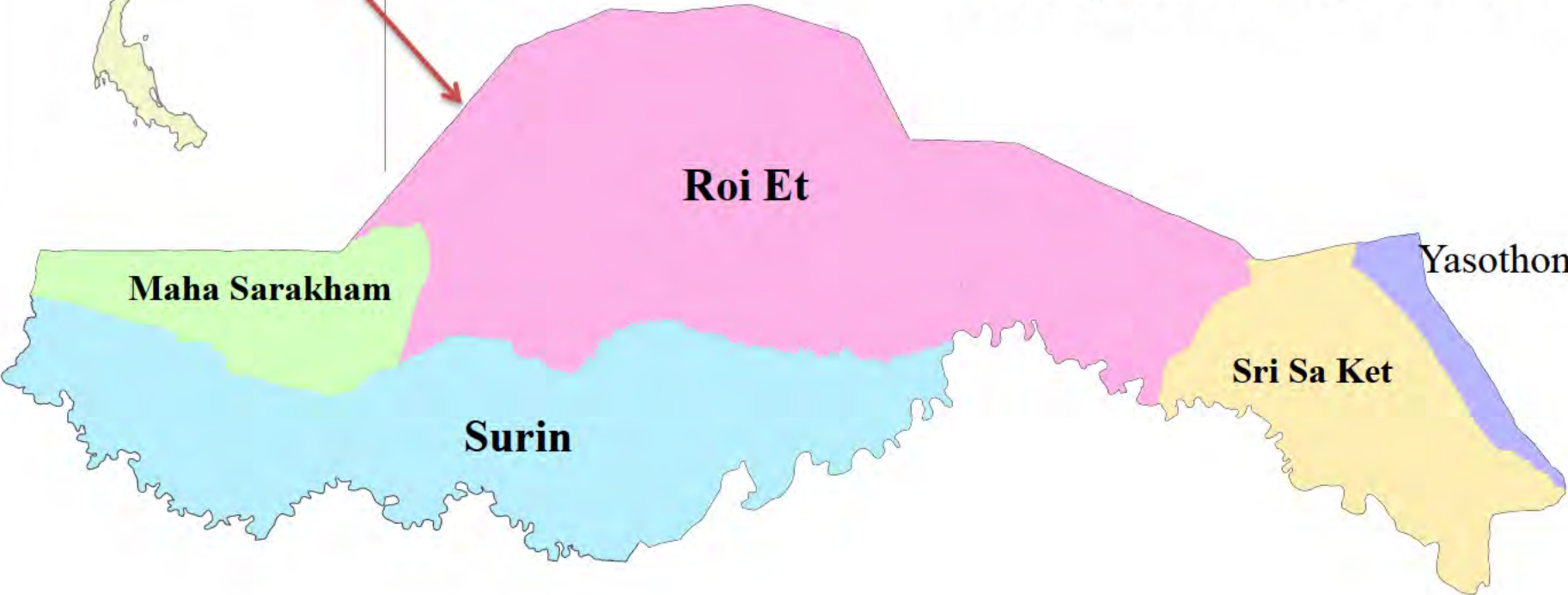
☑ Summary





Introduction

Thung Kula Rong Hai Plain





Thung Kula RongHai Plain



The deterioration of soil resources

- drought in the dry season
- floods in the rainy season





Surin province



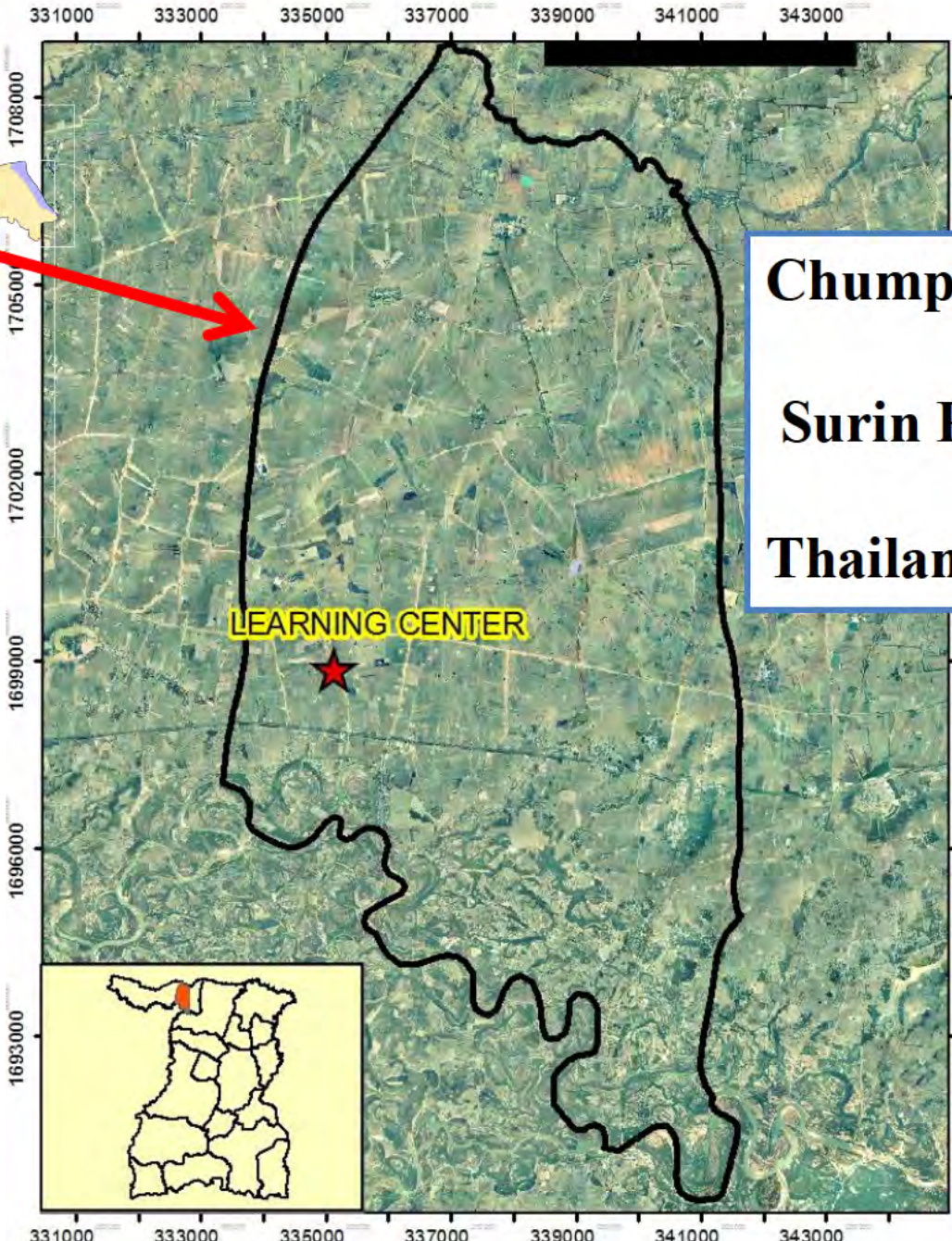
Chumphon-Buri District

64,064 ha

Tha Toom District

28,094.8 ha

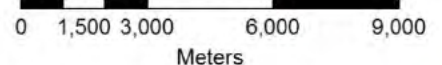




**Chumphon-Buri District,
Surin Province
Thailand.**



scale 1:97,000





Vetiver Grass



Prevent soil erosion



Increase soil moisture



Land Resources Rehabilitation





Objective

The aim of this paper was to demonstrate the outcome of the campaign and promotion of vetiver grass cultivation in Chumphon-Buri District, Surin Province Thailand.





Methodology





Methodology



training and workshops



farmer build



Successful farmers



disseminate to member group



sustainability





Methodology

1. Targets group and Site description

Farmers in Nanongphai Sub-District, Chumphon-Buri District, and people in the nearby areas.





2. Framework for project implementation

- ❑ Study area at learning center

Address: Home ID 246, sub-district No. 3, Kra-Buang Village, Nanongphai Sub-district, Chumphon-Buri District, Surin Province, Thailand

- ❑ The project implementation was started at learning center since 2012 until now.



3. Project implementation

Mission of Land Development Department

- Soil and water conservation .
- Soil rehabilitation and improvement .

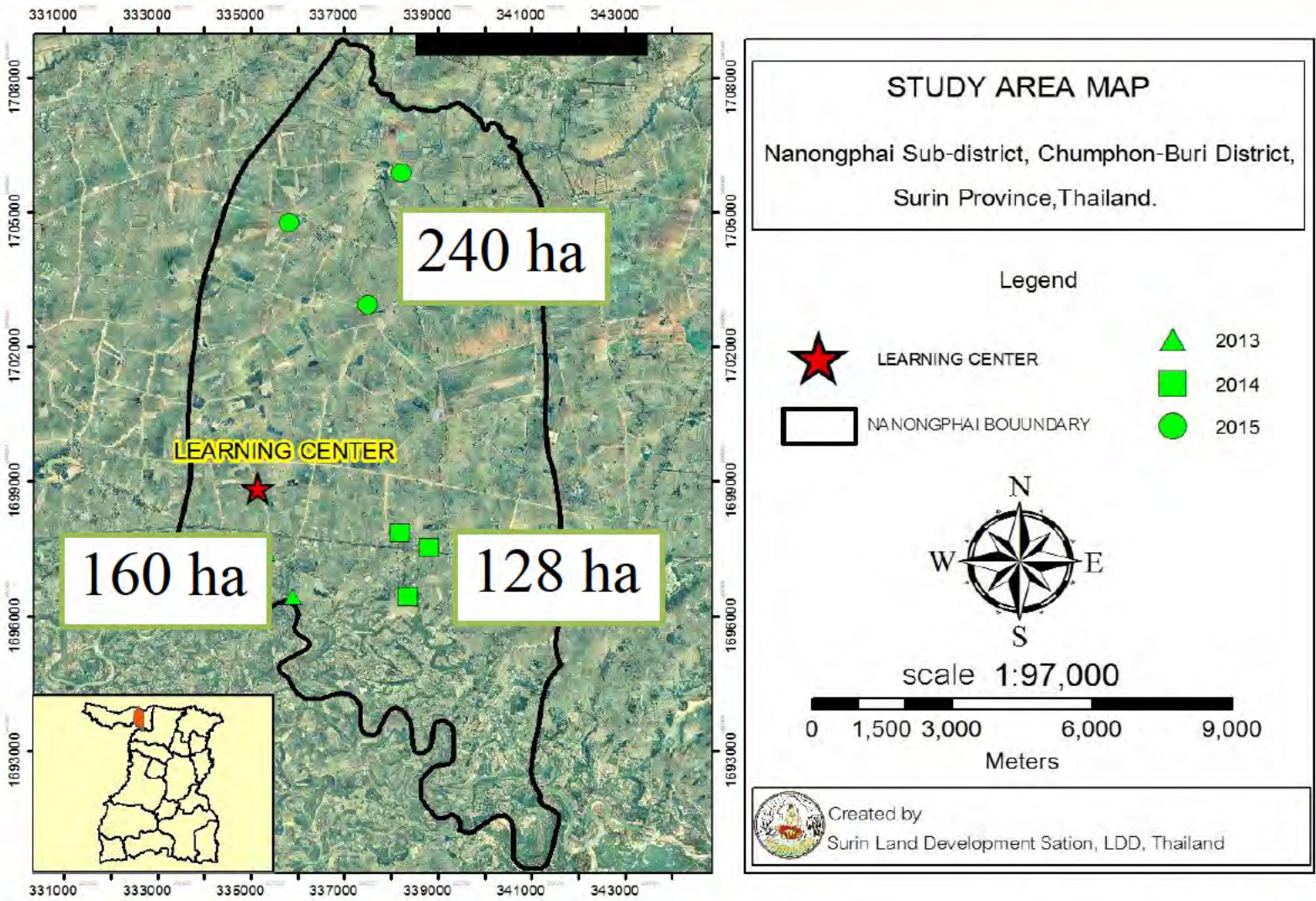


Surin Land Development Station plan organized for campaign and promotion green manure cropping and vetiver seedlings, soil and water conservation systems.

Project / Event	2013		2014		2015	
	quantity	time	quantity	time	quantity	time
Soil analysis (sample)	100	Jan–May	150	Jan–May	150	Jan–May
campaign and promotion green manure cropping (ton)	50	Dec 2013–Jun 2014	50	Dec 2013–Jun2014	40	Dec 2013–Jun 2014
Construction of pond (pond)	17	Jan–May	19	Jan–May	19	Jan–May
Improve acid soil by dolomite (ha)	16	Jan – Jun	16	Jan – Jun	16	Jan – Jun
soil and water conservation systems (ha)	144	Jan–May	112	Jan–May	224	Jan–May



Locations of implementation area and learning center point in at Nanongphai Sub-district, Chumphon-Buri District, Surin Province Thailand.

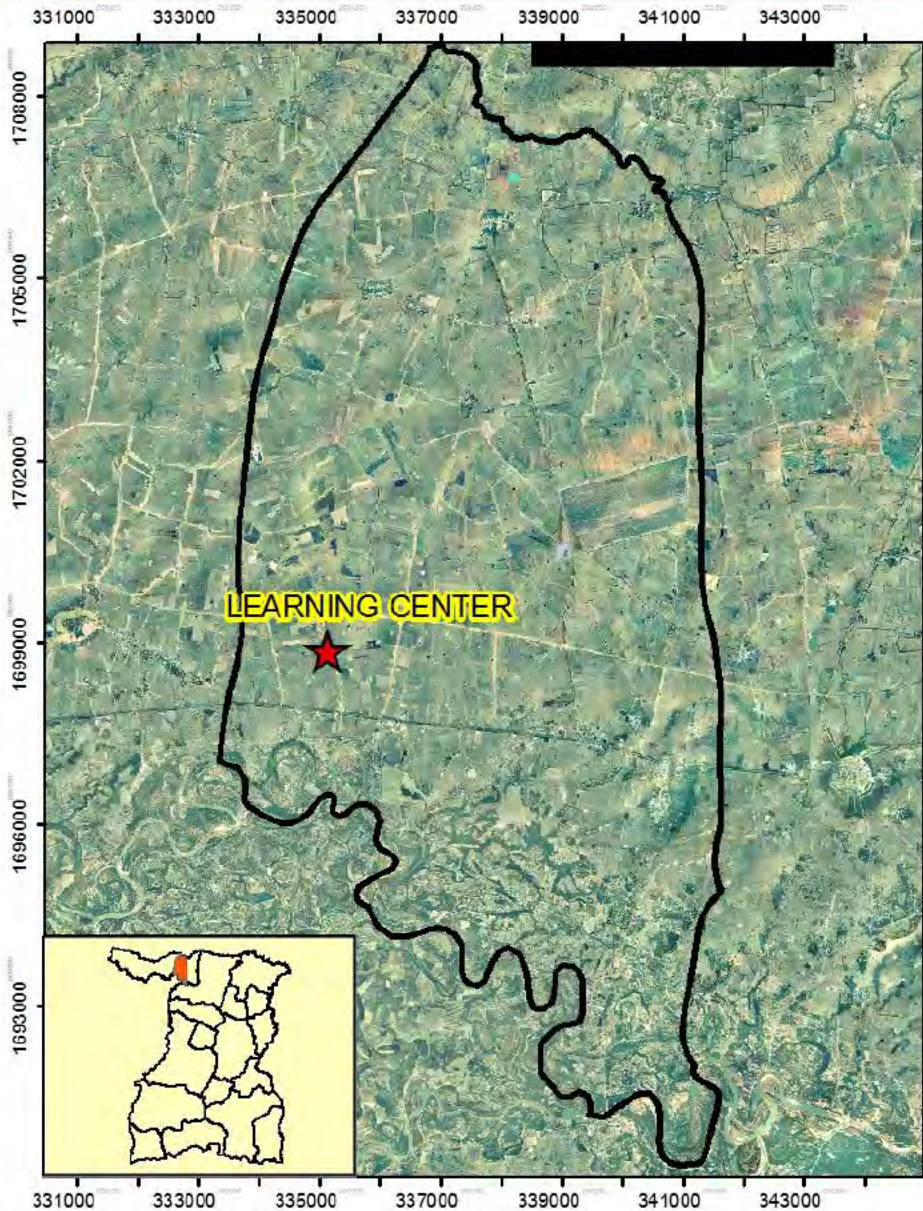




4. The success of the project

The concept of developing master farmer to under “The rice agricultural settlement project” by constructing the learning center model.








STUDY AREA MAP

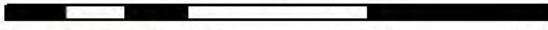
Na Nong Phai sub-district, Chumphon-Buri District,
Surin province, Thailand.


Legend

-  **LEARNING CENTER**
-  **NANONGPHAI BOUNDARY**



scale 1:97,000


0 1,500 3,000 6,000 9,000
Meters

 Created by
Surin Land Development Department, LDD, THAILAND



Soil Taxonomy : Fine, mixed, semiactive, isohyperthermic Aeric (Plinthic) Endoaqualfs

Soil properties before study

Depth (cm)	OM (%)	Avail.P (mg kg ⁻¹)	Avail.K (mg kg ⁻¹)	pH	Texture
0-25	0.7	2.6	11.5	4.8	Sandy loam



❑ Problem

- Soil texture is sandy loam
- Low soil fertility
- Soil degradation from chemical fertilizers
- high production costs





□ How to fix the problem for development in this study area





❑ Growing of Vetiver for improves soil and soil and water conservation





- Composting by Leaves of vetiver grass





☐ Sustainability of farmers to utilize the vetiver grass (knowledge transfer and Acceptance)





the learning center before start project





The learning center after start project





This learning center have been Regional Awards "Contest of Vetiver grass cultivation excellent" organized by Land Development Department in 2014



Her Royal Highness Princess Maha Chakri Sirindhorn visited here. And she met the farmers, that produce royal rice seeds. on 27 October 2014



This learning center produce royal rice seeds for the Chaipattana foundation



On 27 October, 2014, Dr. Sumet Tantivejkul, Secretary - General of the Chaipattana Foundation, visited here.



Director of Land Development Department visited here and materials delivered in the production of organic fertilizers to member of farmers this here on 13 February 2015



Training and knowledge sharing for students, farmers, Governments and Organizations visited this here





Soil properties before study

Depth (cm)	OM (%)	Avail.P (mg kg ⁻¹)	Avail.K (mg kg ⁻¹)	pH	Texture
0-25	0.7	2.6	11.5	4.8	Sandy loam

Soil properties after study

Depth (cm)	OM (%)	Avail.P (mg kg ⁻¹)	Avail.K (mg kg ⁻¹)	pH	Texture
0-25	1.1	10.5	16.6	5.8	Sandy loam



Production costs for rice seed

	Transplanted rice	Seed rice
Production cost before (USD)	737.5	656.3
Production cost after	525.0	481.3
Reduce (USD)	212.5	175.1
Rice yield (ton/ha)	3.3	2.3



SUMMARY

- ❑ Vetiver grass help to adjust soil structure and soil moisture
- ❑ Vetiver grass has been propagated and distributed to farmers and members
- ❑ The learning center accepted for interested public



Thank you for your kind attention







Participatory action research process

has three major steps

1) Preparing a coordinated community.

Qualifying for the community and build better relationships with the community,

2) Pay attention to the community to acknowledge the problems and needs of the community, and

3) Community solutions. The process of implementation, evaluation and development.



Soil Taxonomy : Fine, mixed, semiactive, isohyperthermic Aeric (Plinthic) Endoaqualfs

Soil properties before study

Depth (cm)	OM (%)	Avail.P (mg kg ⁻¹)	Avail.K (mg kg ⁻¹)	pH	Texture
0-25	0.9	2.6	11.5	4.8	Sandy loam