Sustainable Agricultural and
Natural Resources Management
Collaborative Research Support Program

Agroforestry and Sustainable Vegetable Production in Southeast Asian Watersheds

North Carolina Agricultural and Technical State University

Thanks

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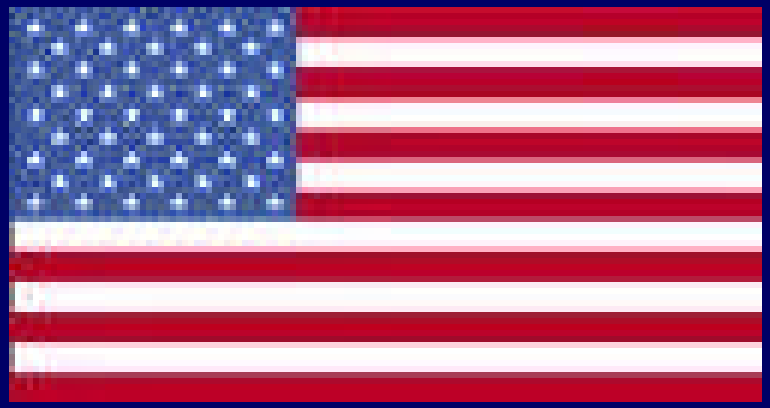
Strong Partnership



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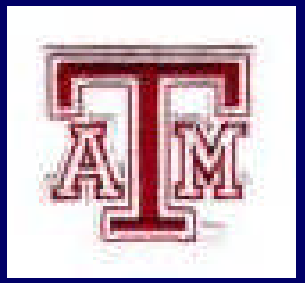
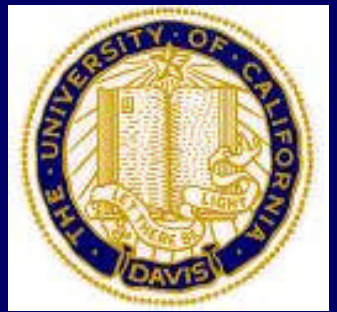
Strong Partnership

SANREM CRSP





World Agroforestry Centre
TRANSFORMING LIVES AND LANDSCAPES

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Lead institution:
North Carolina A&T State University

Cathy Jones

Dr. Alton Thompson

Dr. G.B. Reddy

Dr. Manuel Reyes,
PI and Project Leader

North Carolina Agricultural and Technical State University

US Universities with sub-awards

- University of California-Berkeley

  Dr. Robin Marsh

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US Universities with no sub-awards – but with travel support

- Virginia Tech

  Dr. Conrad Heatwole

- Texas A&M University

  Dr. R. Srinivasan

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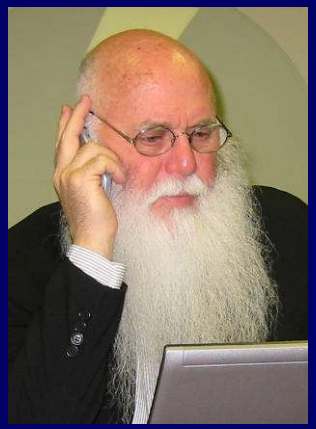
US Universities with no monetary support

- Purdue University
  - Dr. Gerald Shively (Bridging Grant-USAID)
- University of California-Davis
  - Dr. Howard Shapiro



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Australian University

- Central Queensland University

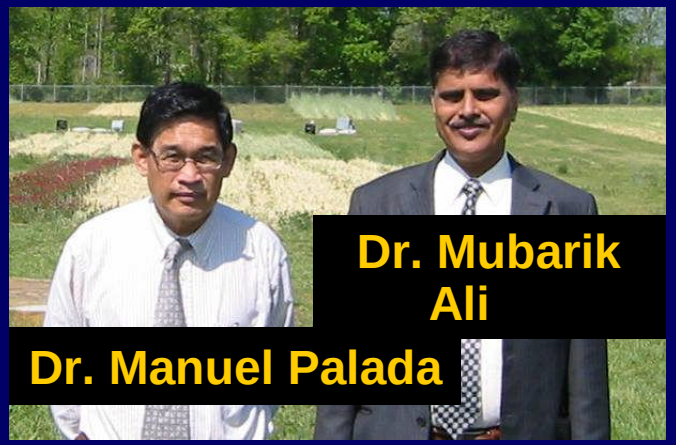
  Dr. David Midmore

International Agricultural Research Centers

- AVRDC-The World Vegetable Center

Dr. Greg Luther

Dr. Flordeliza Faustino



Dr. Mubarik Ali

Dr. Manuel Palada

Dr. Liwayway Engle

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International Agricultural Research Centers

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World Agroforestry Centre
TRANSFORMING LIVES AND LANDSCAPES

PHILIPPINES

Dr. Rodel Lasco

Dr. Delia Catacutan

INDONESIA

Dr. Meine Van Noordwijk

Mr. James Roshetko

Dr. Joshi Laxman

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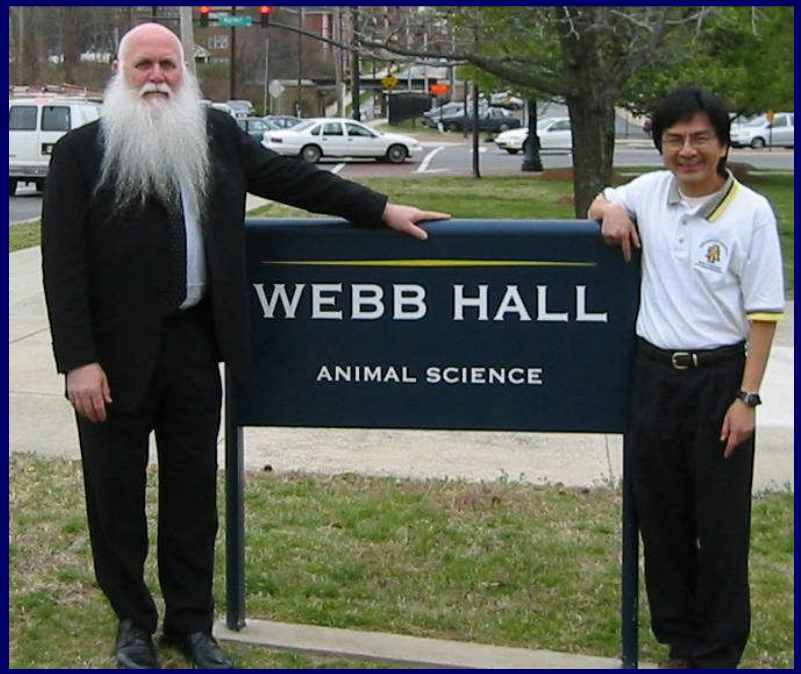
Private partner no monetary support

Dr. Howard Shapiro



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Inter-CRSP

- IPM-CRSP
  - Dr. Michael Hammig
    Clemson University

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Consultant

Dr. Ronald Morse

Professor Emeritus – Virginia Tech

Pioneered no-till vegetable production in the USA

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VIP Universities

V - Vietnam

I - Indonesia

P - Philippines

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Vietnam

Nong Lam University

Dr. Dang Ha and his team

Vietnam team June 2, 2005

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Indonesia

- Bogor Agricultural University

Dr. Bambang Purwoko

Dr. Anas Susila

North Carolina Agricultural and Technical State University

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Philippine Universities

Dr. and Dean
Vicky Espaldon

Dr. and Dean
Victor Ella

Dr. Jean
Saludadez

Dr. & Director
Agnes Rola

Paul Catalan

Dr. Ma. Ellen
Javier

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VIP Teams

V - Vietnam

I - Indonesia

P - Philippines

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Vietnam

TMPEGS Vietnam May 12, 2006

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SANREM CRSP

Indonesia

TMPEGS Indonesia May 2, 2006

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Philippines

TMPEGS Philippines May 18, 2006

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VIP Farmers

V - Vietnam

I - Indonesia

P - Philippines

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Vietnam

Vietnamese farmers May 11, 2006

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Indonesia

Indonesian farmers May 4, 2006

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Philippines

Philippine farmers May 17 to 18, 2006

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Outline

1. Problem Statement
2. Objectives
3. Location
4. Methodology
5. Questions and Discussions

SANREM CRSP

Problem Statement

Communities in many forest and vegetable producing watersheds in Southeast Asia are suffering from poverty, and forest, soil and water resources degradation

Nanggung, Indonesia
May 3, 2006

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Response

TMPEGS

"TeaMPEGS"

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Outline

1. Problem Statement
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TMPEGS

Technology

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TMPEGS

Marketing

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TMPEGS

Policy

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Environmental & Economic-social impact

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Gender

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TMPEGS

Scaling-up

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PEG

TMPEGS Philosophy:

To be a support to small scale farmers both women and men

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Technology:

Develop economically viable and ecologically-sound vegetable-agroforestry (VAF) systems

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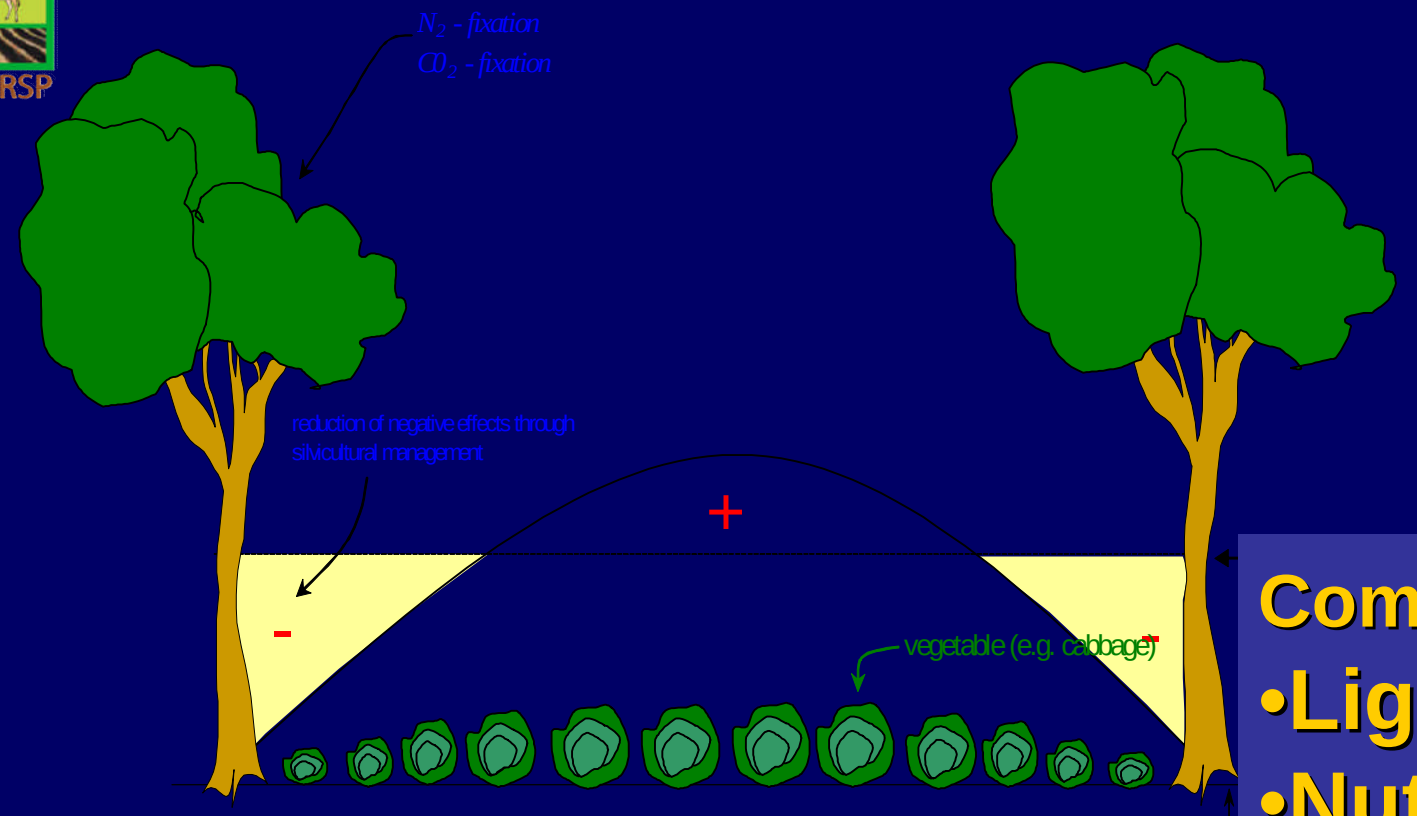
SANREM CRSP



Competition:
- **Light**
- **Nutrient**
- **Water**

Quantification of optimum tree spacing for vegetable production

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TMPEGS

Marketing:

Develop a market value chain at the local, regional, and national levels that builds upon existing marketing strategies.

Nanggung, Indonesia, May 4, 2006

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Policy:

Identify policy options and institutional frameworks that promote sustainability of vegetable-agroforestry production and reward environmental services

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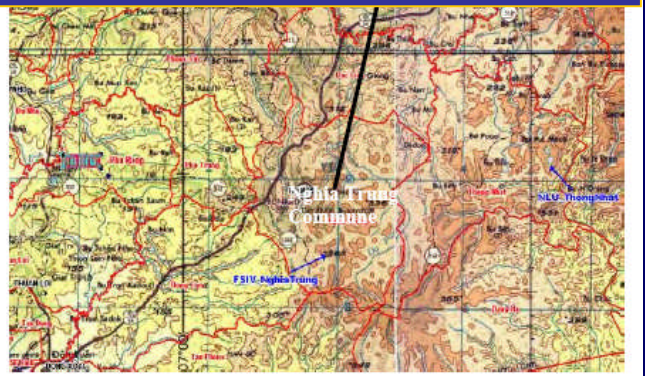
Environmental and Socio-economic:

Assess the short and long-term environmental and socio-economic impacts of integrated vegetable-agroforestry systems

Nghia Trung Watershed

Drains to Ho Chi Minh City



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Gender:

Provide mechanisms to ensure women's involvement in decision-making and sustainable production and marketing practices to improve their socioeconomic wellbeing within the VAF system.

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Scaling-up:

AVRDC's Indigenous Vegetable Germplasm

Build host country capacity to manage and disseminate integrated vegetable-agroforestry systems

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1. Concise Problem Statement
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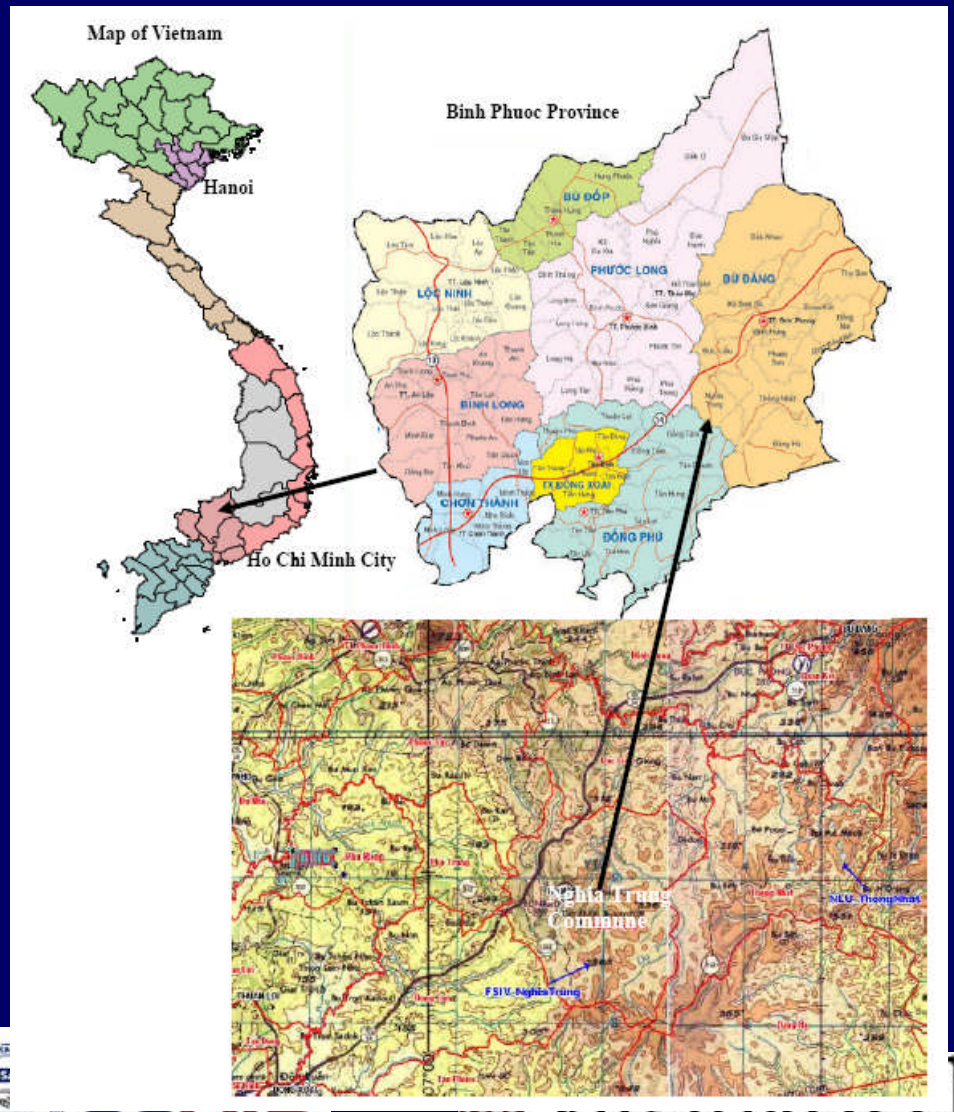
Vietnam

Binh Phouc Province



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Vietnam

VAF:

Cacao and Vegetables

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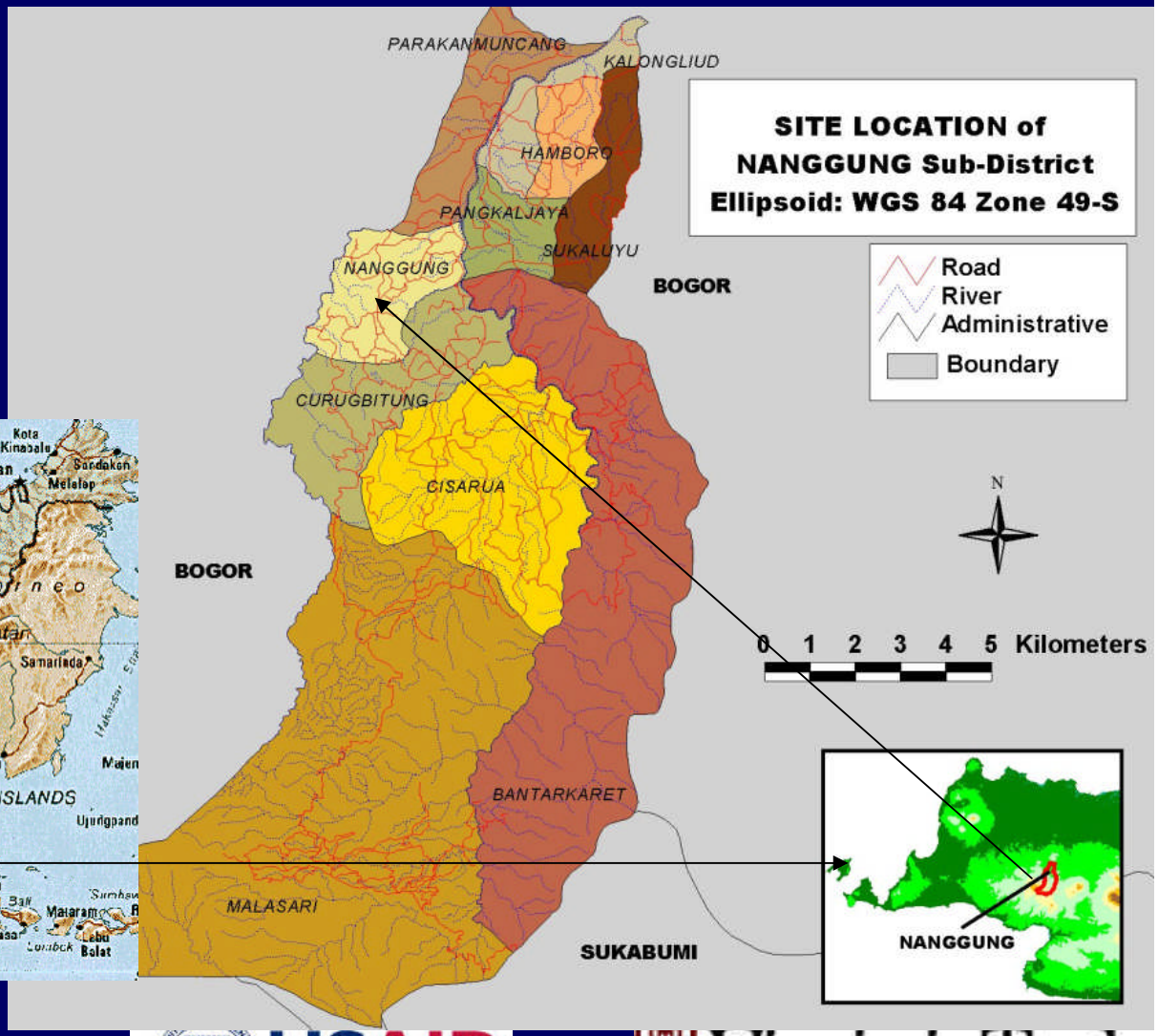
Indonesia

- Nanggung Sub-District
- Near Bogor



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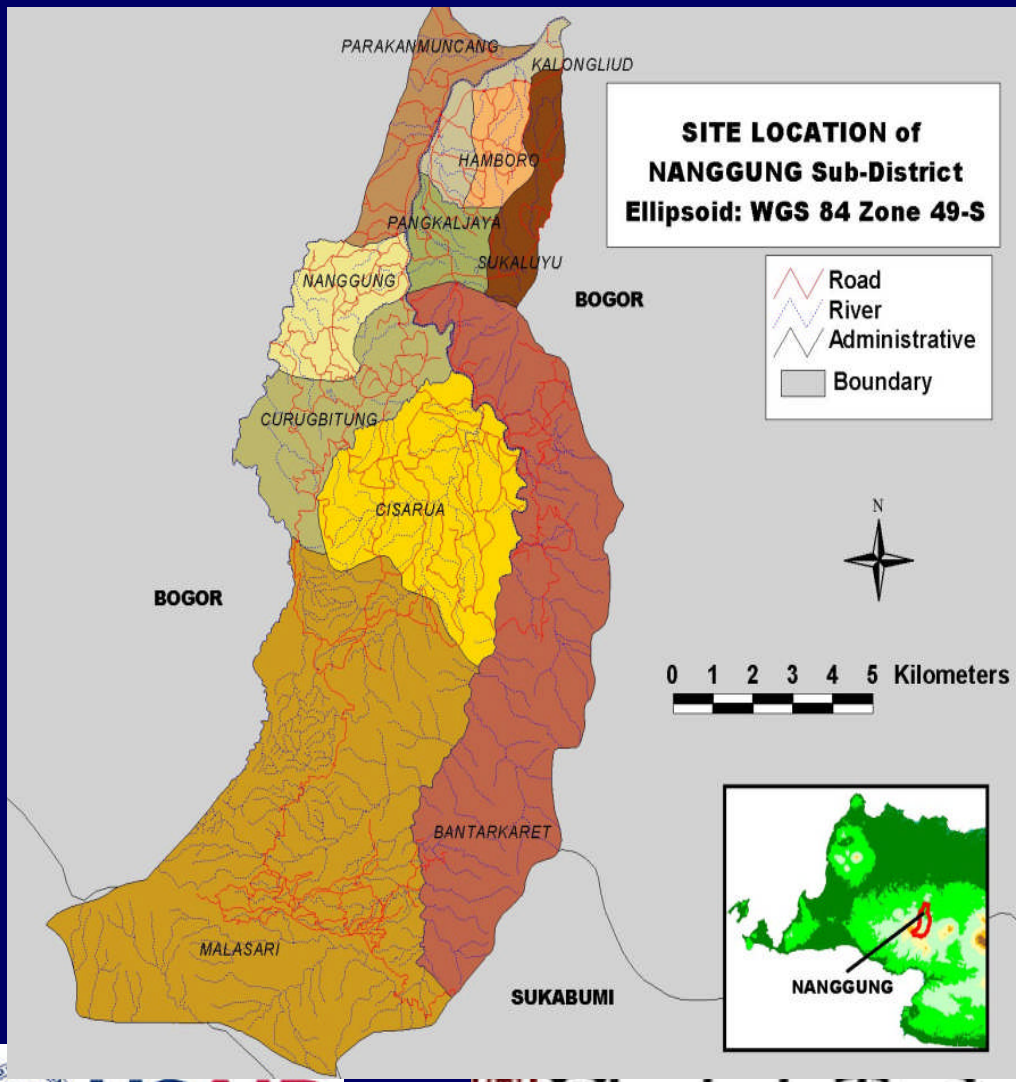
Indonesia

- Nanggung Sub-District

VAF:

Home-garden



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Indonesia Site

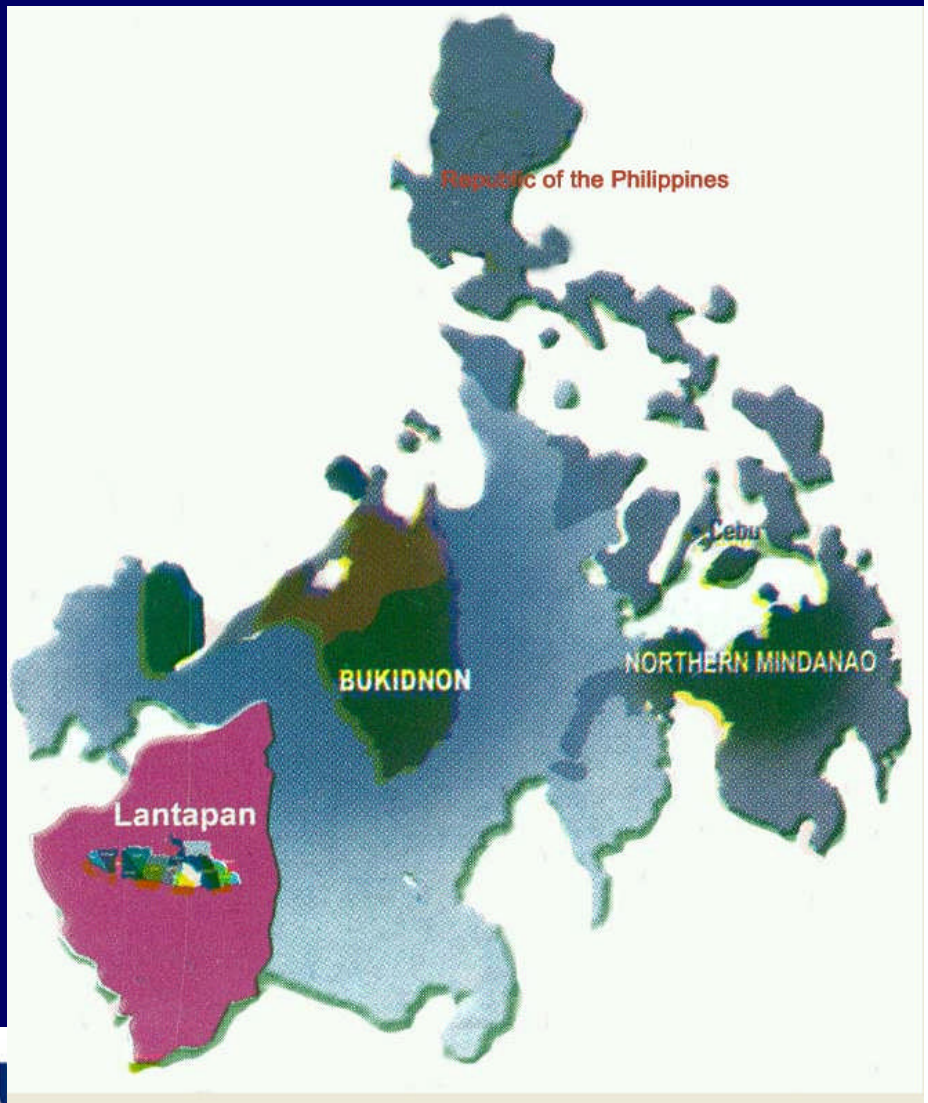
- Chose Nanggung to be the research site
  - Complementary with a previously funded USAID project
  - Kebun – Pekarangan setting
- Pasir Sarongge
  - If additional funds are provided, scale-up site

Dr. Susila – farmer – Sweet potato

Farmer proudly showing his new home

Philippines

- Lantapan, Bukidnon
- Island of Mindanao



VAF:

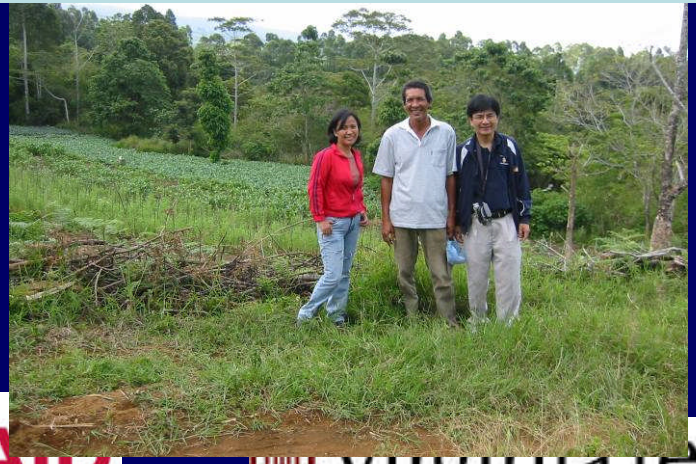
Alley-Cropping

Philippines site

- Chose Lantapan, Bukidnon, Mindanao as project site. This is complementary with a USAID funded ‘Growth with Equity in Mindanao’ project
- If additional funds are available scale up site, adjoining vegetable growing communities in Mt. Kitanglad Range Natural Park, Bukidnon Province

Jasmin Agbon and Northern Mindanao Vegetable Association President Remotigue

Farmer proudly showing his vegetable plots



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Alley Cropping

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Methodology

Menu of Technologies, some of which are:

- Vegetable-Agroforestry systems
- Improved and indigenous vegetables
- Drip irrigation
- Integrated Pest Management
- No-till

Emphasis of IPM component

Bio-intensive IPM systems, i.e., those that emphasize biological controls, agroecosystem diversity, habitat management, botanical pesticides, and other biologically-based strategies

Proposed IPM work plan

From baseline survey results, we will decide which vegetables and trees will be targeted for the VAF systems

Next: Conduct a participatory appraisal of the pest situation on target vegetables and trees. “Pest” = insects, diseases, weeds, nematodes, vertebrates

Participatory Appraisal (PA)

Direct field observations and discussions with stakeholders (farmers, scientists, others) will be the primary appraisal methods.

Collaboration

The IPM CRSP Activity 1.7 "*Monitoring of Crop Pests and Their Natural Enemies in Selected Vegetables*" could also generate appraisal information that will be pertinent to the SANREM effort

Proposed IPM work plan

Based on PA results, plan farmer participatory research trials with our farmer collaborators

Year 2: Oct 2006 – Sept 2007

Farmer participatory research on IPM components

- Initiate trials in Nanggung based on PA results
  - Includes evaluation of VAF systems designed by TMPEGS and farmer collaborators
  - Could include trials for testing specific IPM components

Year 3: Oct 2007 – Sept 2008

- Continue to conduct farmer participatory research trials on IPM components. Continue evaluating VAF systems designed by TMPEGS and farmers.
- If IPM technologies being tested are showing success, begin packaging IPM components.

Year 4: Oct 2008 – Sept 2009

- If IPM technologies are successful, assemble them into packages that can be offered to farmers on a more extensive scale and work with farmers to test these packages.
- Train NGOs and government extension staff in these IPM packages so they can be offered to larger numbers of farmers. TMPEGS could also conduct participatory farmer training activities and write extension materials if funding permits.

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Questions and Discussions

Thanks!!!!

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