Labour productivity in rubber latex tapping among smallholder rubber farmers in the Kyarinnseikkyi Township, Kawkareik district, Kayin State,Myanmar

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University of Yangon, Myanmar

Hanoi University of Science and Technology (HUST) **26-28,May 2017**

Outline:

1. Introduction – labour productivity , role of Myanmar Agriculture and contribution in GDP, Environmental Problems and effect on human health, Relevant question, Objectives, Sources of Data and Methodology

2. Background – General consensus Study Area rubber underperformed

3. Some Key Observations

4. Results and Fingings

4. Some Suggestions

5. Conclusion

Introduction

Labor productivity means - the quantity of output per time spent or numbers employed (Overman, Redding and Venables (2003)

- **agriculture is the mainstay of the economy of Myanmar**
- **32 % (contributing in GDP) in 2014/15**
- **61.2 % of employment in agri:**
- **825.56 ha in 1996 (set-up) in Kyarinnseikkyi**
- **58%(natural rubber production) of Kayin State (Land Record Department, Kyarinnseikkyi, 2015)**
- **19406.33 ha in 2015**
- **7844 farm households relying on rubber cultivation (21 village tracts)**

Relevant questions of research for rubber smallholdings

What are the major driving forces for labour productivity?
What are the factors that constraints in rubber latex tapping?
How to control Labour's Health problem by Rubber tapping?

Geographical Background of the Study Area

-Southern part of Myanmar
-total area-1389.52 km^2
-21 village tracts and
-129 villages

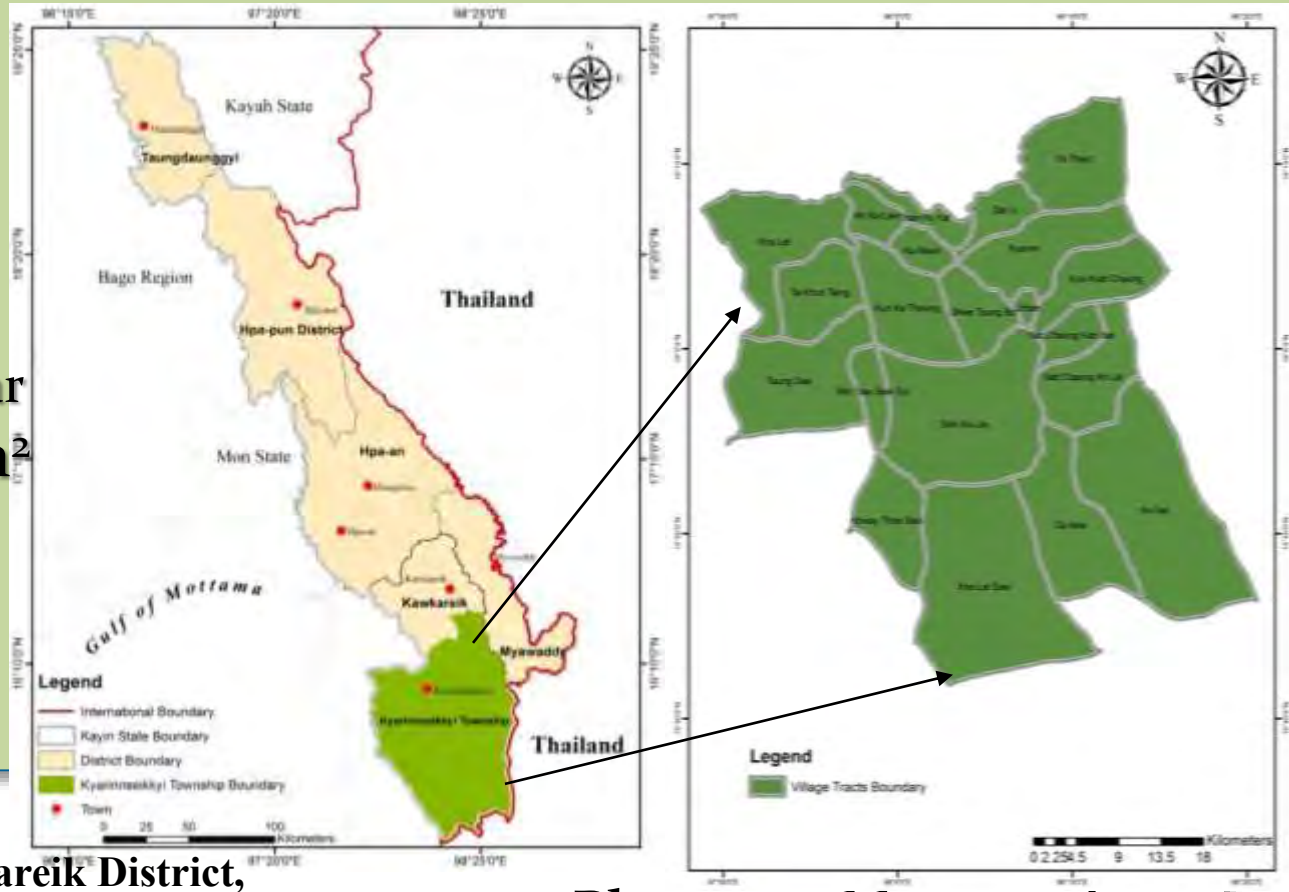


Figure: Location of Kyarinnseikkyi Township, Kawkareik District, Kayin State

Plate: rubber tapping
Source: photo, 30.4.2015

Sources of Data and Method

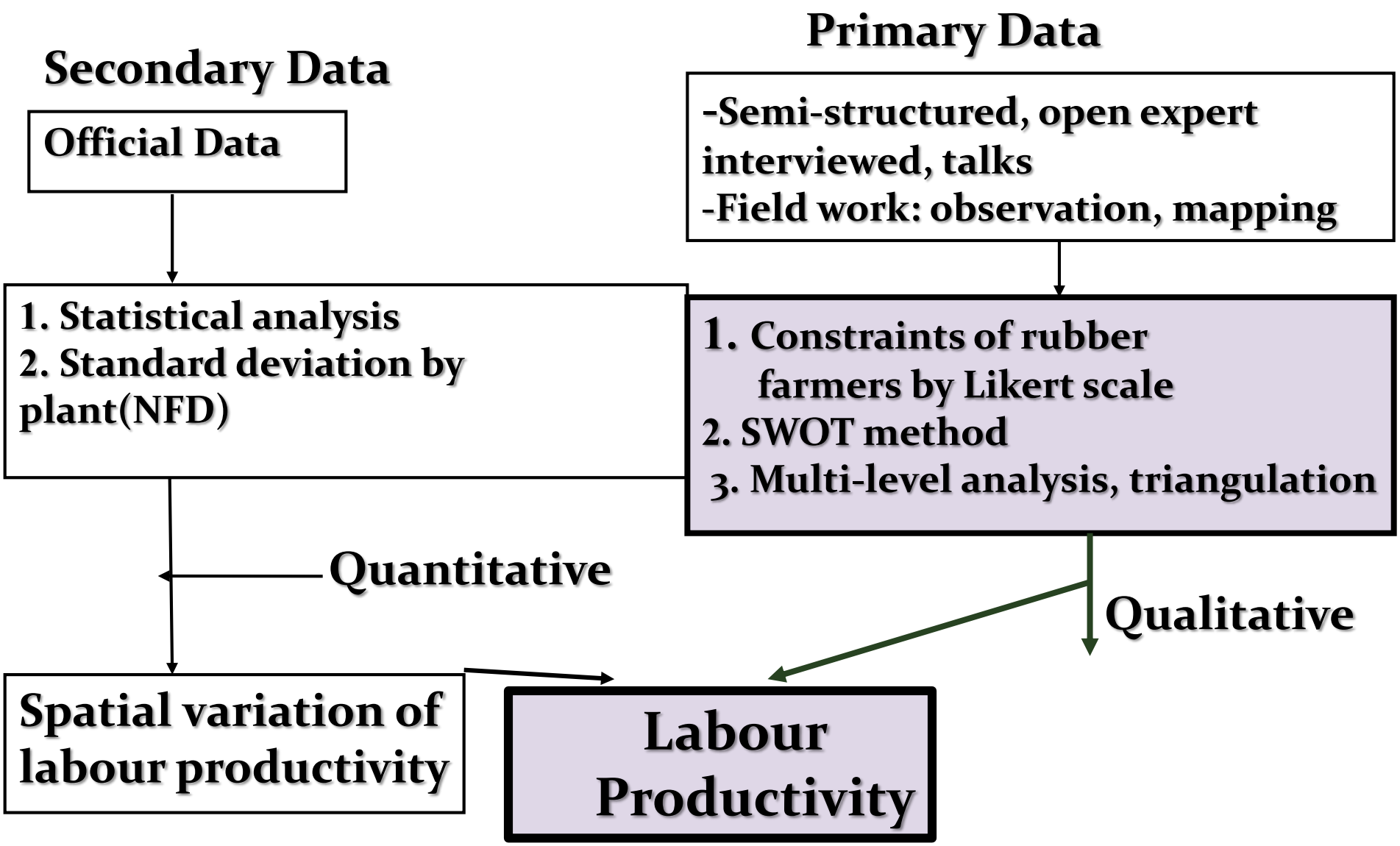


Figure: Conceptual Frame Work

Source: Author, 2015

Spatial Distribution of Rubber lands in Kayin State

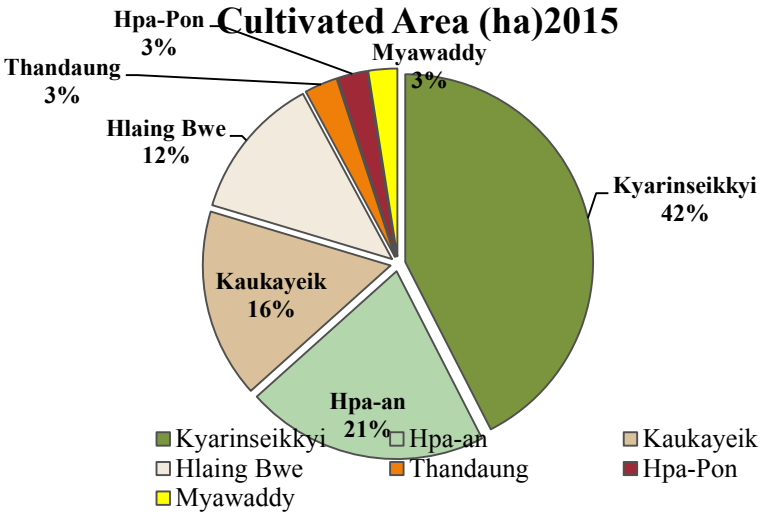


Figure: Rubber Cultivated Area (ha) of Kayin State,2015
Source: Land Record Department, Kyarinnseikkyi, Tsp

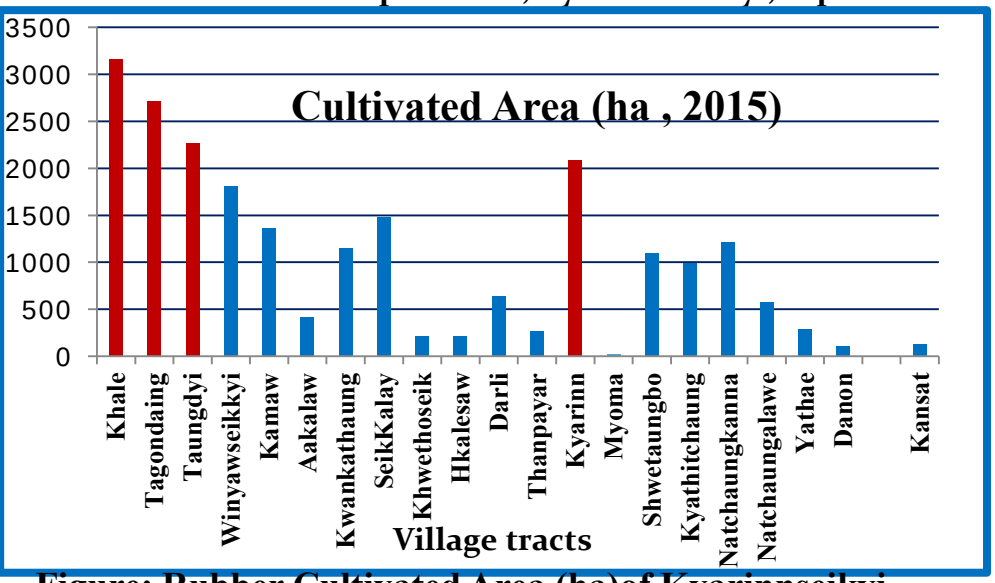


Figure: Rubber Cultivated Area (ha)of Kyarinnseikyi
Source: Land Record Department, Kyarinnseikkyi,2015

58% of natural rubber production of Kayin

Exploratory spatial data analysis

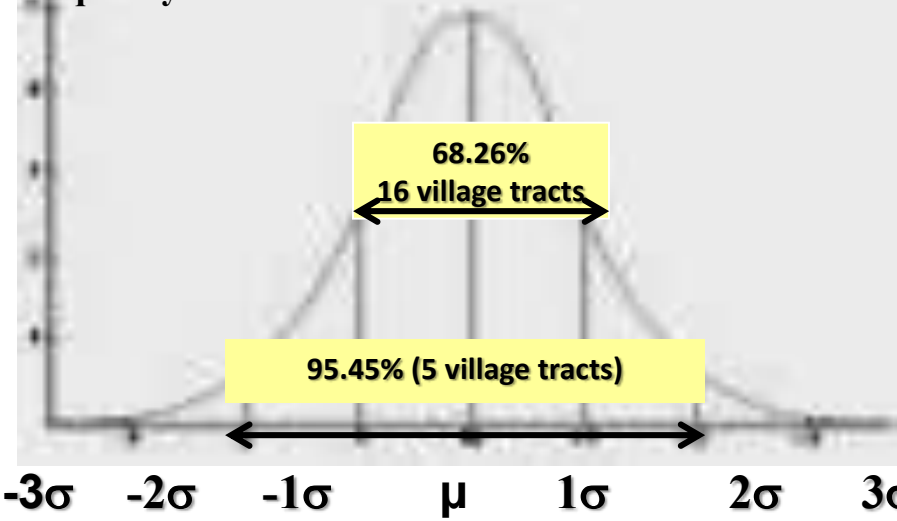
16 village tracts - **+/-1σ**

Cultivated area and number of plants - more than others

- labour productivity is higher than others

-Consequently:Labour productivity is concerning with Rural Development: Sustainability

Figure: labour productivity by plant level on normal frequency distribution curve



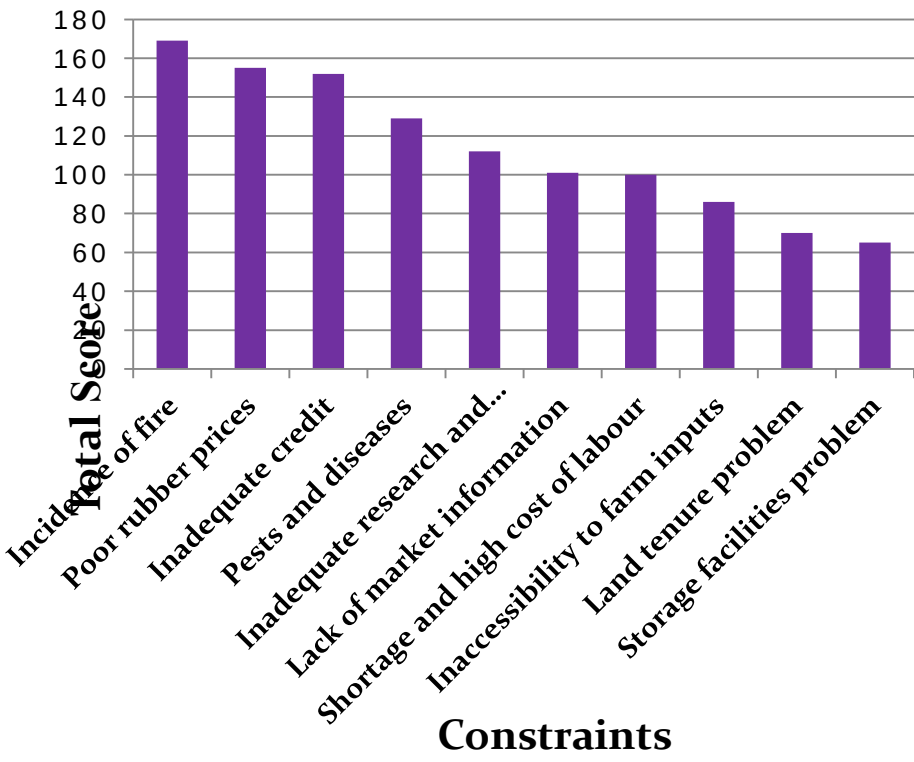
Source: Structure Interviewed (April, 2015),Land Record Department, Kyarinnseikkyi

What is Labour Productivity ??

A:Table : Expenditure of smallholder farmers on labour for each plant per year

No	Items of expenditure	Cost of each plant/ kyats
1	Cleaning	1205
2	To burning	250
3	Lay foundation	125
4	For pit	100
5	To put fertilizer to ground	41
6	To grow sprout	125
7	To put fertilizer to ground (2nd time)	24
8	To wait rain, 25 days	3125
9	To clean for grass by machine	625
10	To feed fertilizer	41
11	To maintain wet for stem	300
12	To control / burn fire	22.4
13	Bestir	1562
14	To collect latex	8
	Total	6473.4

B:Experienced constraints of rubber farmers



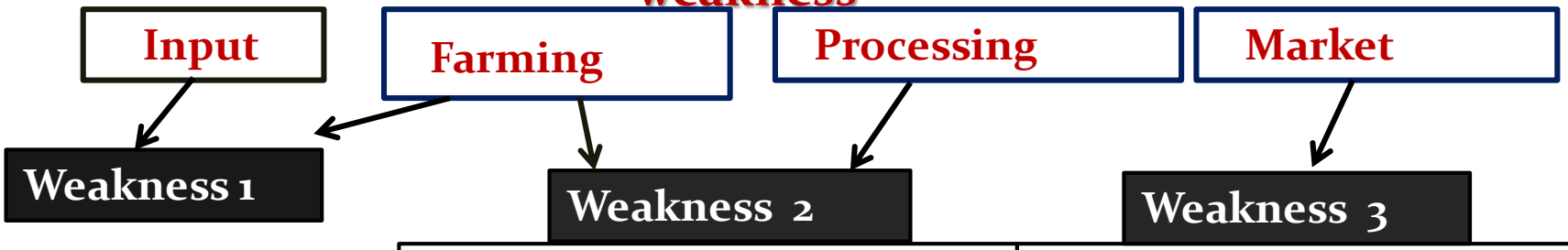
B: Source: Structured Interview(April, 2015),
Note: based on Likert scale (Osuala, 1993) method

A: The labour productivity measure by dividing gross value of individual plants at factor cost by the number of workers in that plant

(Webber and Michael Horswell)

Overview results and findings

Rubber labour Productivity : Strength of productivity is determined by weakness



- low level of inputs
- poor quality of fertilizers
- outdated cultural practices - nursery, tapping
- lack of credit (MOAI)
- poor infrastructure farm roads, storage facilities)

- lack of proper processing facilities
- high processing cost
- lack of Financing
- lack of waste-water treatment
- low quality output smoked sheets (colour)

- exports – inconsistency of quality and supply
- dependency on China and Thailand market
- lack of international markets information
- increasing border trade – especially to China
- high transportation, logistics and handling costs

Environmental Problems and effect on human health

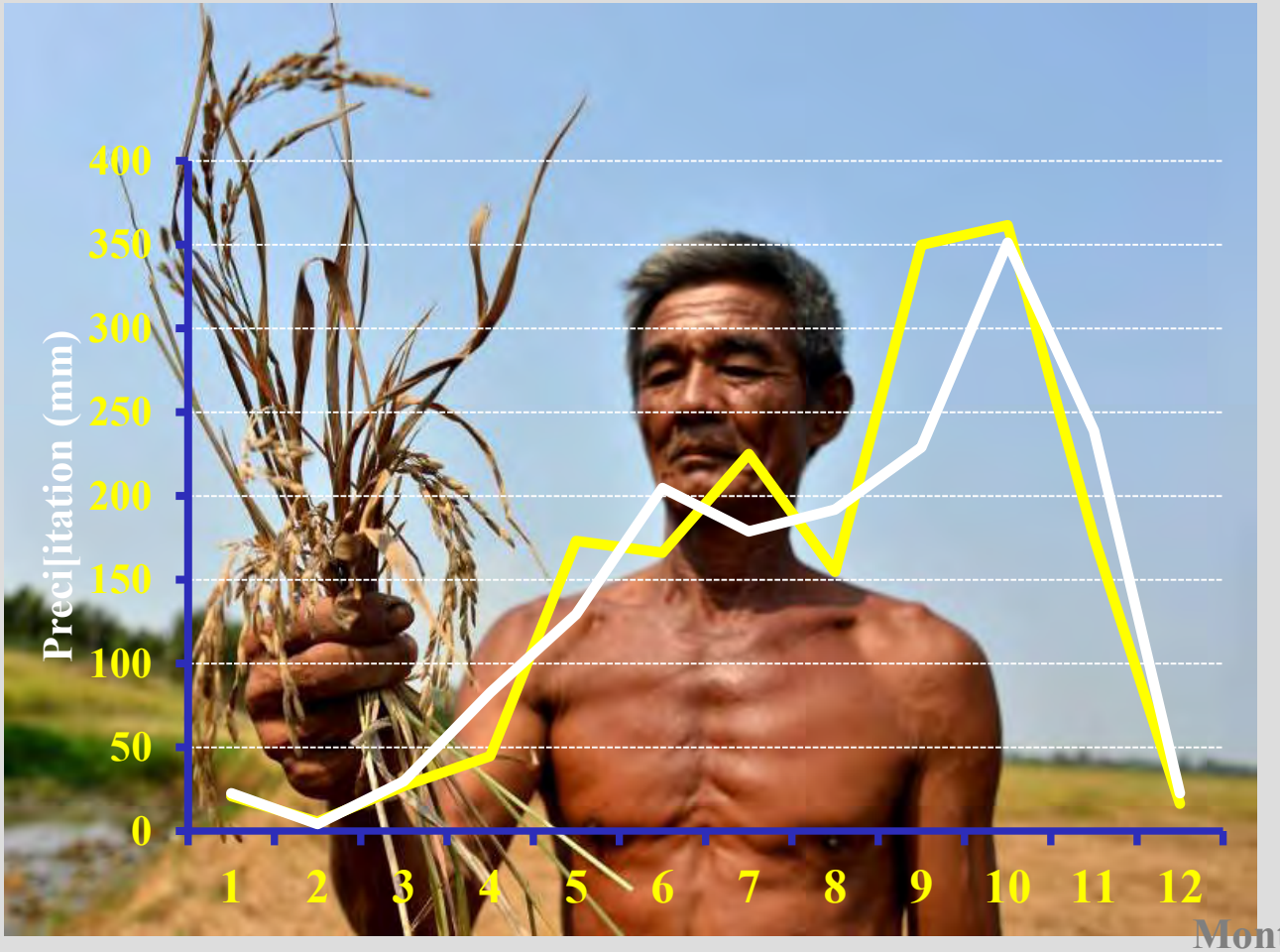
- Smoked rubber effects on labours' health
- Dried rubber sheet causes air and water pollutions, main concern is the smoke particles from fuel wood burning
- In rubber latex industry, main concern is wastewater and odour pollution (open interviewed, 2015)

Source: Author,2015

Thank You!!

How to create Rural Development Partway???
How to control **Labour's** Health Problem??

Environmental issues affecting on agricultural production in the Vietnam Mekong Delta



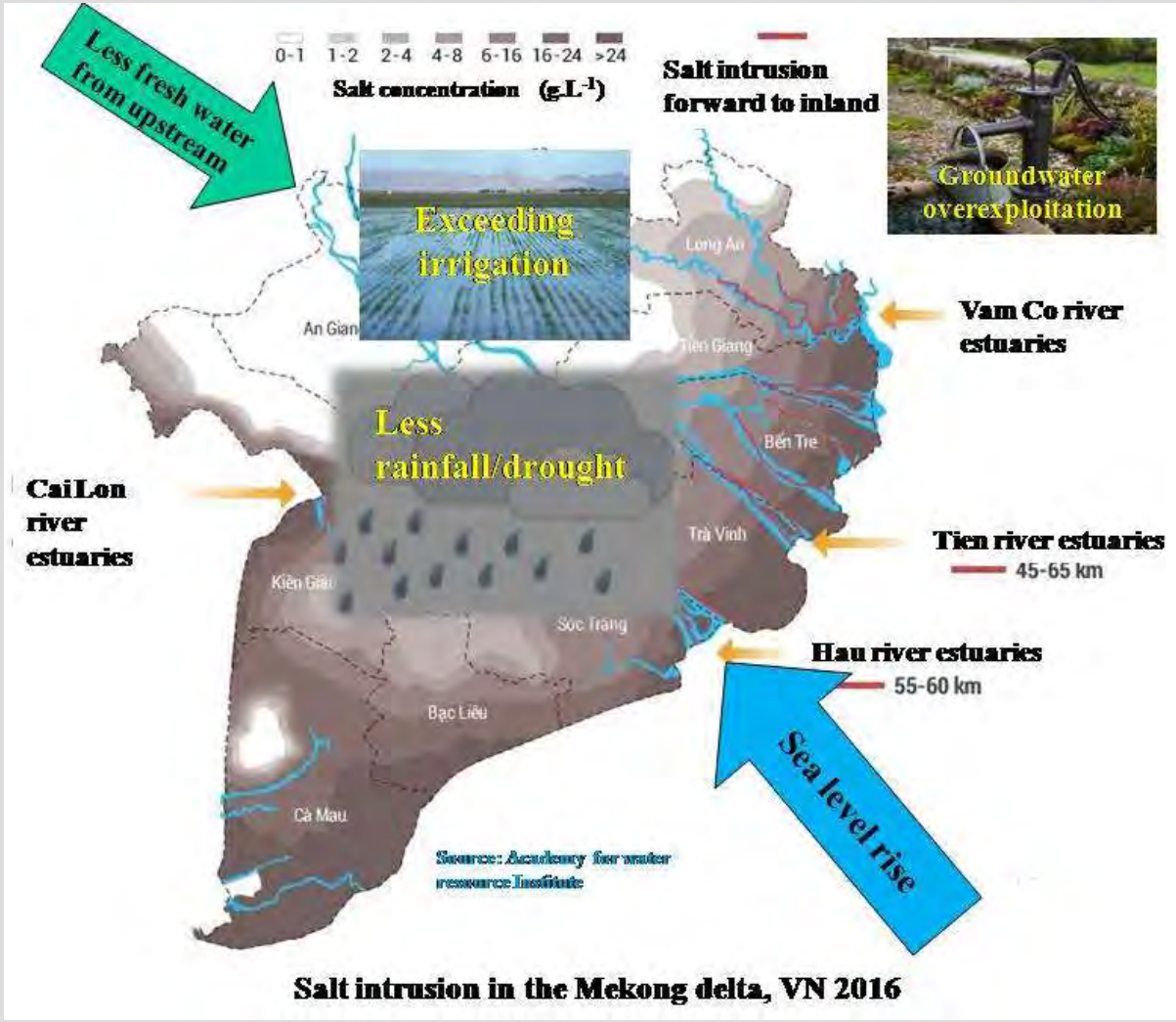
Duong Van Nha

Faculty of Agriculture and Rural Development

Kien Giang University

Contents

1. Introduction about The Mekong Delta of Vietnam (VMD)
2. Environment affecting on crop production
3. Environmental change creating a good opportunity for agriculture ?
4. Discussion



People's livelihoods in the Mekong Delta Vietnam










➢ *The Mekong Delta ranks amongst the top 5 deltas in the world most likely to be severely affected in terms of climate change* ***(IPCC, 2007)***

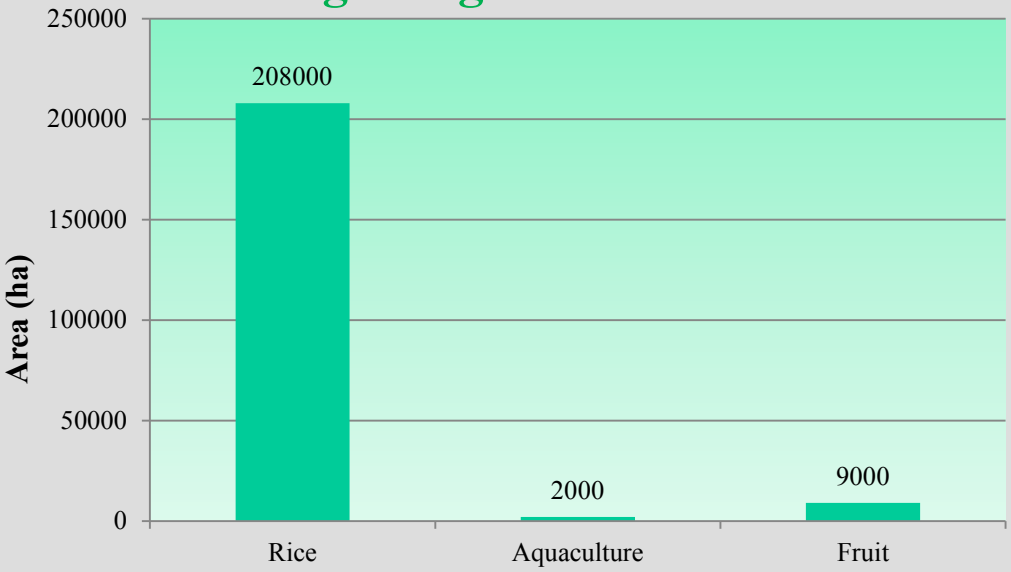
➢ ***Expected environmental impacts on the Mekong Delta (Tokuko, 2011)***

- **Primary Impacts**
  - Temperature Change: 1.1 C (2050), 1.5 C (2070)
  - Precipitation Rainy Season: -5 to 5%, Dry Season: -5 to 0% (2050)
  - Sea level rise: 12 cm (at present), 33 cm (2050), 45 cm (2070)
  - Increased frequency and intensity of typhoons
- **Implied Impacts**
  - More floods and droughts (less water during dry season)
  - Possible permanent inundation for some areas
  - Increased salinity intrusion (area and duration)
  - Increased risks of infectious diseases

➢ ***Potential scenarios developing agriculture in the Mekong Delta (Mekong Delta plan, 2013)***

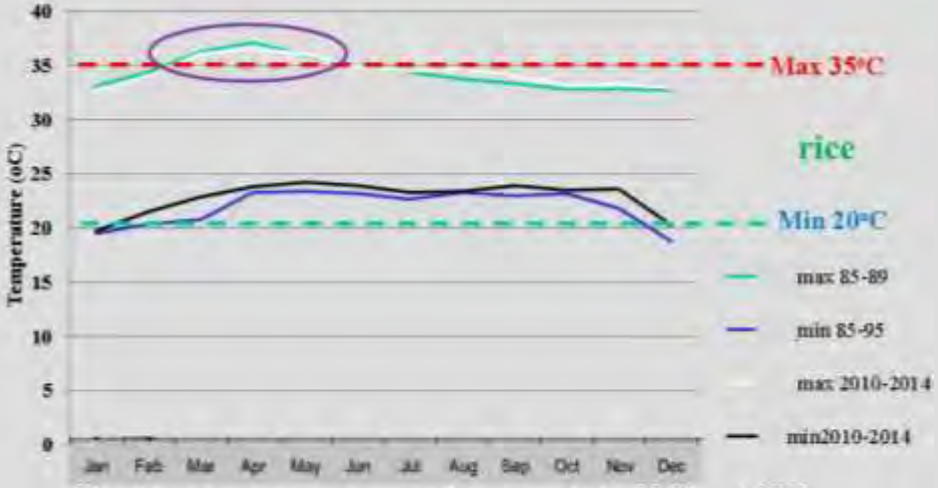
Criteria	Ranking
Safe (Required safety level, Costs of flood protection, Return on investment of safety level)	Very low
Prosperous (competitive advantage, effective urbanisation and industrialization, Cost-effective infrastructure)	Low
Sustainable (water, landuse, flood defence, coping with climate change and external economic development)	Low

Affecting on agriculture



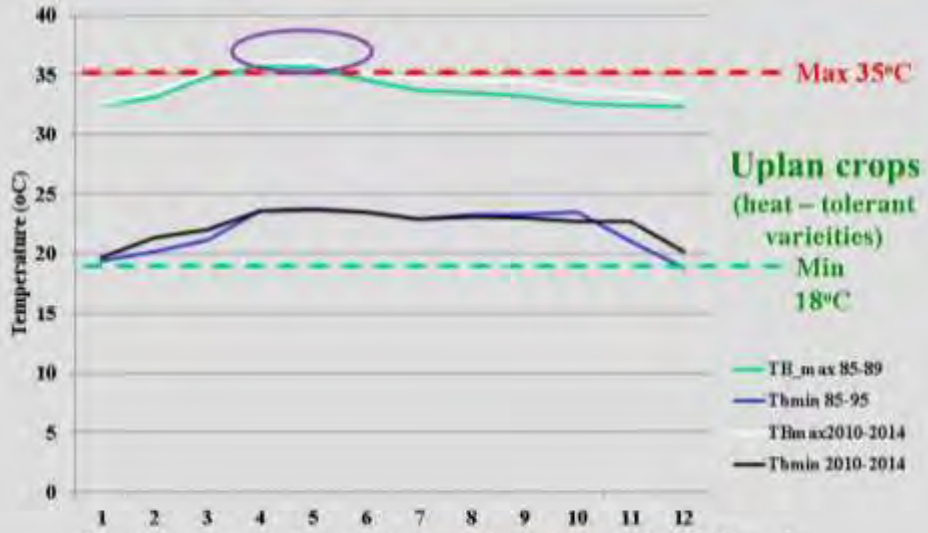
Agricultural fields damaged by drought-salt intrusion in the Mekong Delta (2016)

Temperature., Precipitation affecting crop production

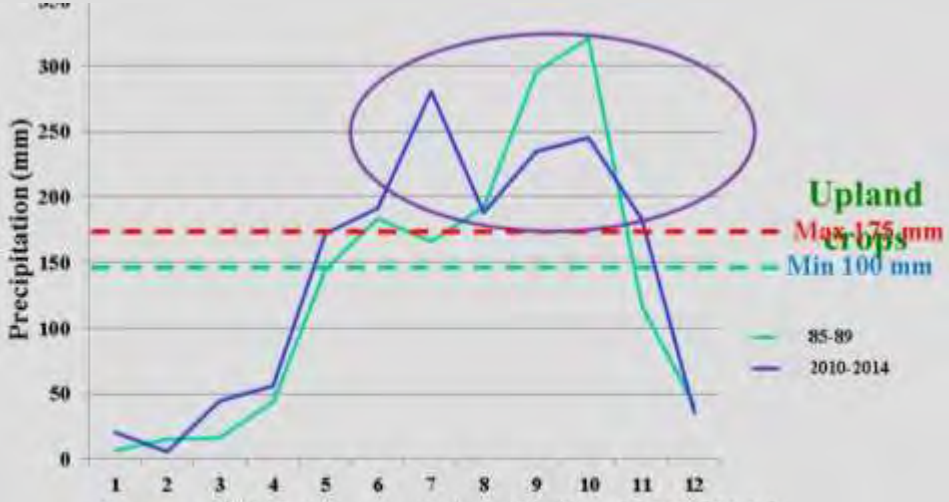


Monthly mean temperature at the two periods: 85-89 and 2010-2014 in Moc Hoa and Tan Thanh district, Long An province

Monthly mean precipitation at the two periods: 85-89 and 2010-2014 in Moc Hoa and Tan Thanh district, Long An province



Monthly average temperature at the two periods: 85-89 and 2010-2014 in Tân An/Cần Đước



Average rainfall at the two periods: 85-89 and 2010-2014 in Tân An/Cần Đước

+ 1°C, rice output will reduce 10% (MARD)

Drought caused a decrease of 20-30% of crop productivity (MARD)

Global Warming: Who Loses—and Who Wins? Climate change in the next century (and beyond) could be ***enormously disruptive, spreading disease and sparking wars***. It could also be a ***windfall*** for some ***people***, ***businesses***, and ***nations*** (Gregg Easterbrook, 2017)

Is there any advantage for agricultural production in the Vietnam Mekong Delta under climate change condition?

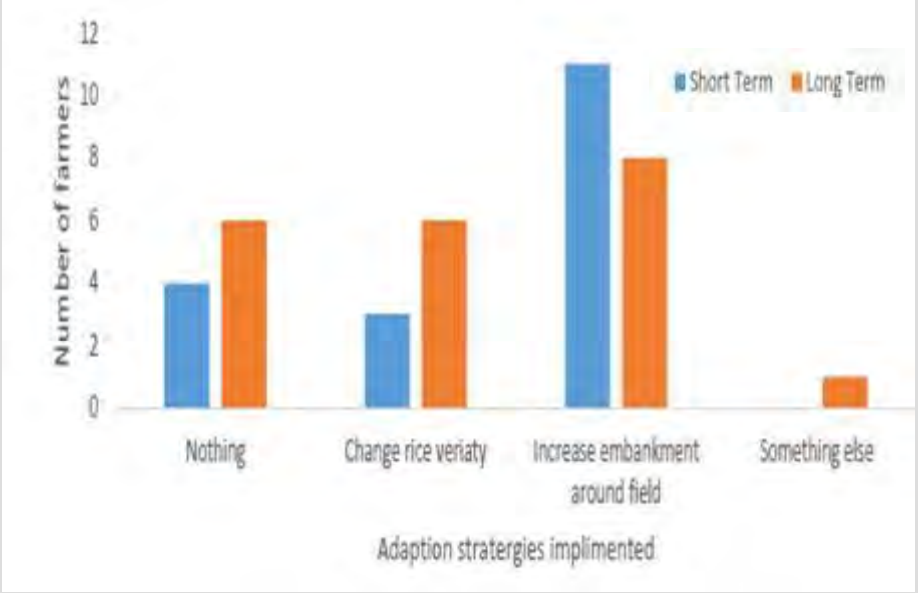
i) supporting and stimulating a diversified and specialised high value agricultural sector(s): utilizing brackish aquaculture, flood-base agriculture and fresh aquaculture, fruits etc.) and;

ii) Establishing a thriving agro-based research, development and innovation capacity that enhances the future adaptability of agricultural production systems to the changing resources dynamics (Mekong Delta plan, 2013)

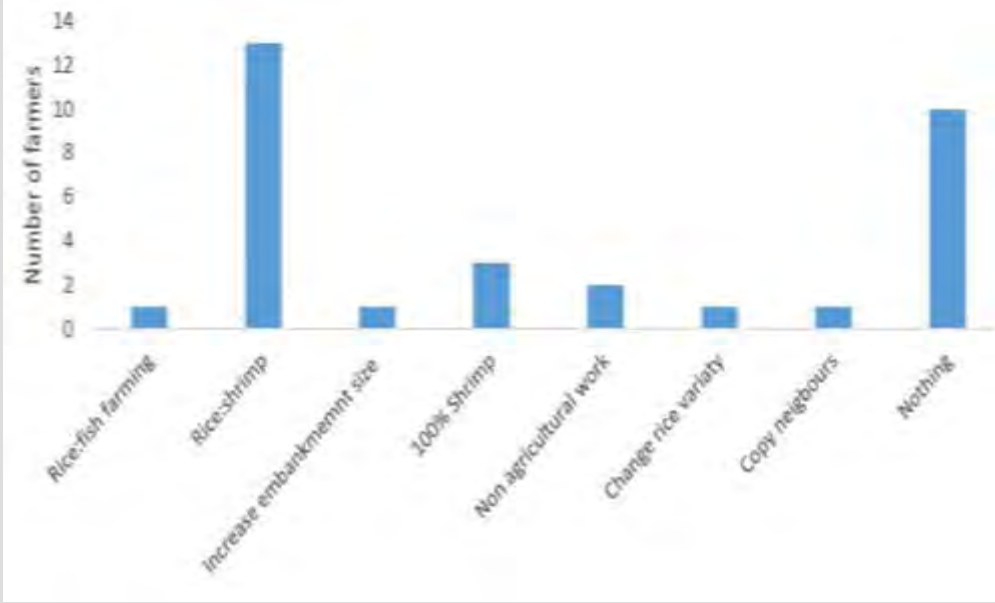
Adaption strategies to changing environment in the Mekong Delta

- ***Scientists***
  - Water saving irrigation
    - Alternative Drying wet irrigation on rice [Hung, (2015), Tin (2012)]
    - Partial rootzone drying irrigation on sweet potato (Nha, 2016)
  - Mitigating impact of salt intrusion by applying chemicals: Si (Nhan, 2013), Ca (Thien, 2016)
  - Creating new salt tolerance varieties (Can Tho Uni., Omon rice research institute)

- ***Authorities***
  - Building high dyke to prevent salt intrusion in dry season and store fresh water
  - Re-structuring agricultural patterns to adapt to “new environment”



Adaption strategies implemented by farmers in Kien Giang province (Dale, 2017)



Farmers future plans for adapting to saline in Kien Giang province (Dale, 2017)

- **Adaption strategies implemented by farmers *in Long An province (AGU, 2016)***
  - Choosing salt tolerance varieties
  - Switching rice-rice to shrimp-rice
  - Choosing salt tolerance varieties or long - day varieties
  - Adjusting crop seasonal calendar

4. Conclusion

- Environment showed not only negative effects but also potential for agricultural activities in the Mekong Delta
- People in the Mekong Delta implemented several adaptations to existing environmental changes and adaptive strategies for future
- Environmental trend will be expected to be a big challenge for agriculture in the future

- ***Recommendation:*** stakeholders in agriculture working together to mitigate negative impacts of and to adapt to environmental changes based on potentials

Thanks for your attention!

Gender in Mangrove Resource Management: A case study in a coastal district of Quang Tri province, Vietnam

Presenter: Dr. Nguyen Thi Hong Mai

DAAD-Ha Noi: 26-28 May 2017

1. Background of the research

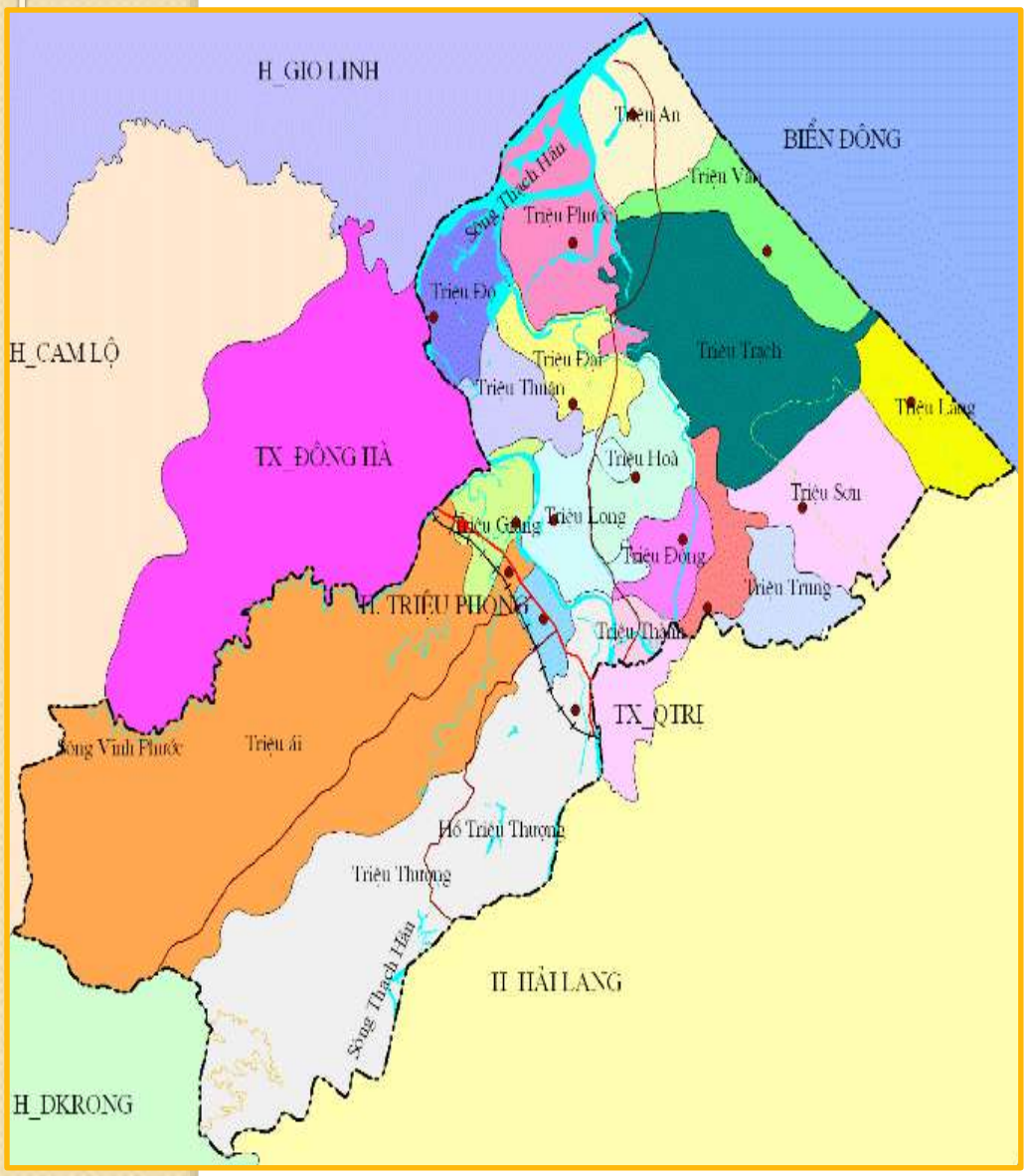
Quang Tri is a province in the Central Coastal region with a total coastline of 75 km. This is a place heavily influenced by extreme weather.

Trieu Phong is one of the two districts of Quang Tri province with a mangrove land area about 789 hectares (ha).

The study was conducted in two communes Trieu Do and Trieu Phuoc in Trieu Phong district, Quang Tri province, where mangroves disappear over a long time. The restoration and new planting process have started since 2011 (Trieu Phuoc) and 2015 (Trieu Do), At present, the total area of mangrove is newly planted in the area of 58.5 ha.

Household interviews were conducted by random sampling with 80 households in these two communes

2. Objectives of the research



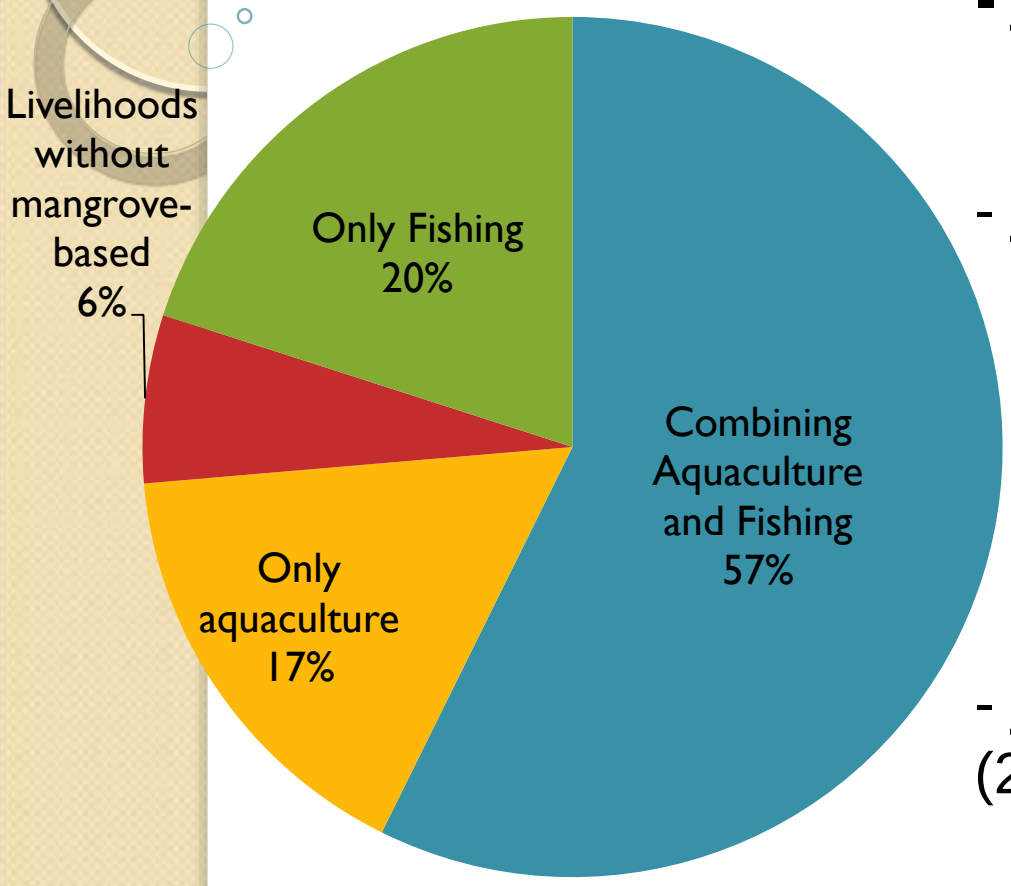
General objective:

To contribute to scientific and practical basis for research on gender role in usage and management of mangrove forests.

Specific objective:

- To understand the role of gender in exploitation and management mangrove forests.
- To propose solutions to involve gender issues in mangrove forest management.

3. Gender and Mangrove-based Livelihoods



- **Gender participation:**
  + Aquaculture: 1.7% Female
  + Fishing: 68.3% Female
- **Gender-based labor division**:
  + Men play the main role in both aquaculture and fishing.
  + Women:
    Minor role in mangrove-based livelihoods
    Housewife- Small business.
- **Other mangrove resources use** (24% surveyed Households):
    Bird trapping (Male);
    Vegetables (Female)

Products exploited by Men are more destructive than by Women.

3. Gender and Mangrove-based Livelihoods

- Positive changes related to Mangrove forest develop:
  - Increasing the natural products: shrim, fish, bird
  - Protecting dykes, preventing impacts of flood to shrim and fish ponds
  - Protecting aquaculture cultivation
  - Contributing to income increase from aquaculture production
- Negative changes
  - Difficult for catching fish/shrim → destroy forest
  - Increasing enironmental pollution → difficult for aquaculture cultivation

No difference between female and male in perceiption of mangrove forest role.

3. Gender and Mangrove-based Livelihoods

- Changing job when mangrove forest develop:

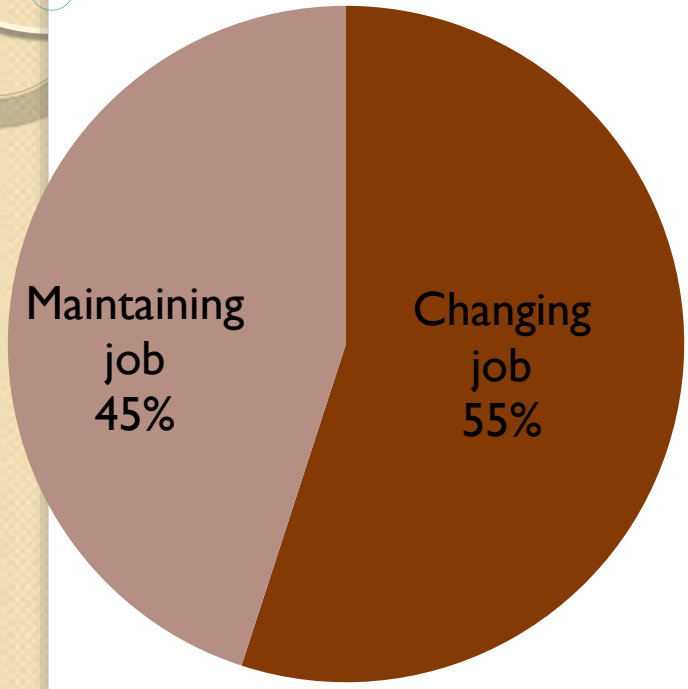
Observed communes	Yes	No	Total
Trieu Phuoc	34 (85%)	6 (15%)	40 (100%)
Trieu Do	10 (25%)	30 (75%)	40 (100%)
Test Chi-Square P-value = 0.000			

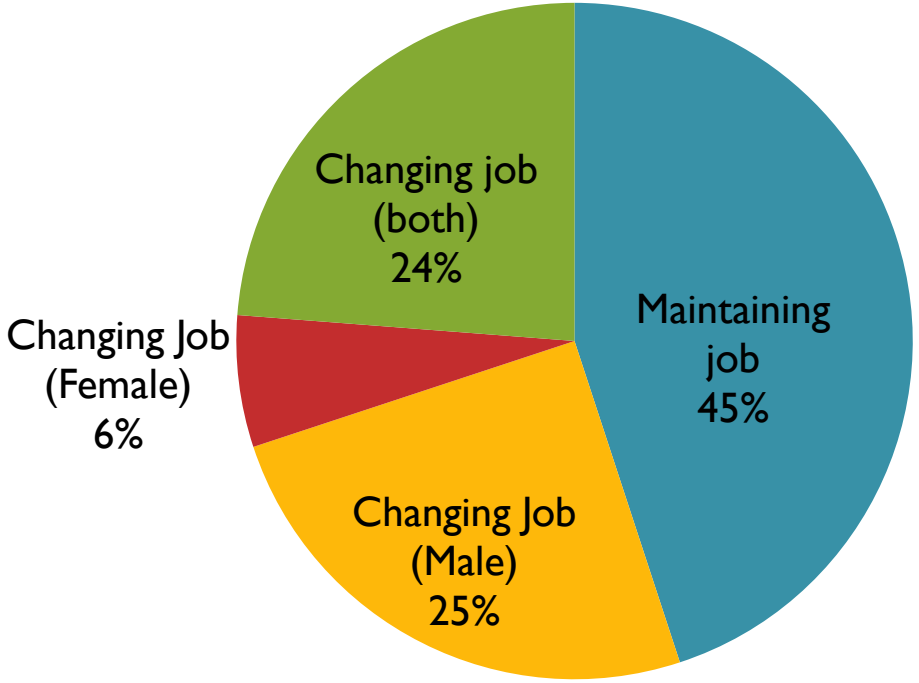
There is difference between Trieu Phuoc and Trieu Do commune in Mangrove-based job changing. Trieu Do has 2-year mangrove forest, while Trieu Phuoc has 7-year Mangrove forest.

Mangrove forest develop, local people tend to change their livelihoods

3. Gender and Mangrove-based Livelihoods

Changing job when mangrove forest develop:

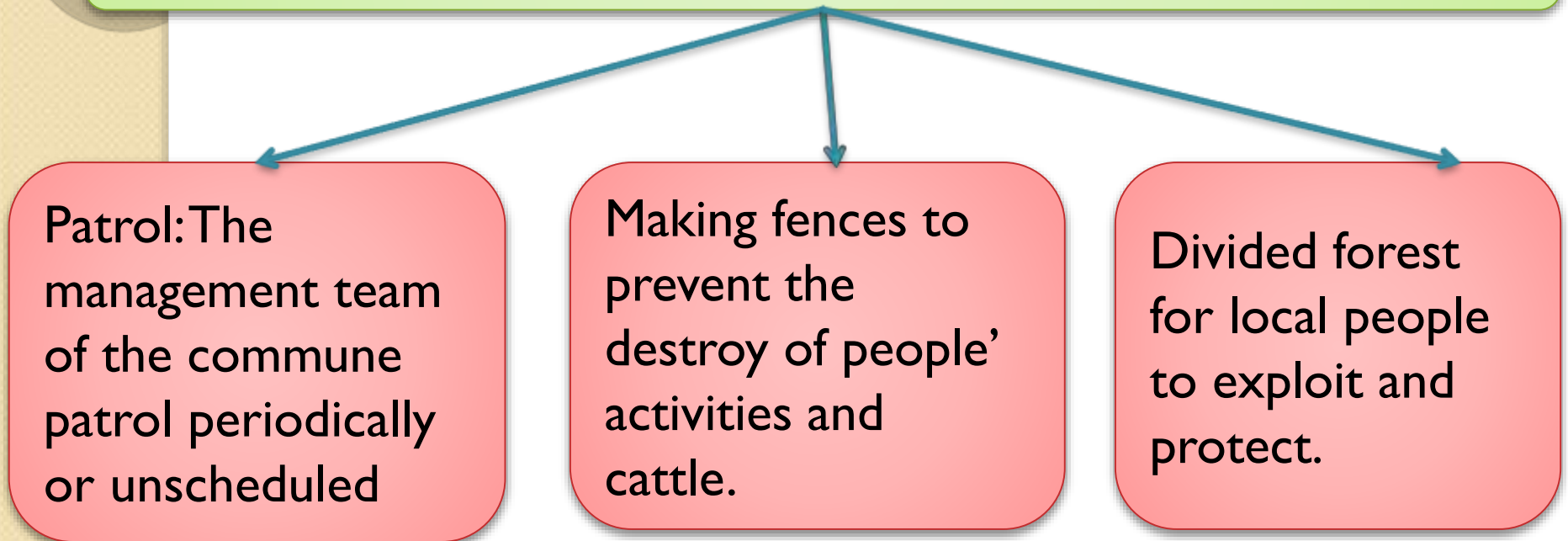




Women will be more likely to stay with mangrove areas than men.

4. Gender differences in planting, managing, and protecting the mangroves

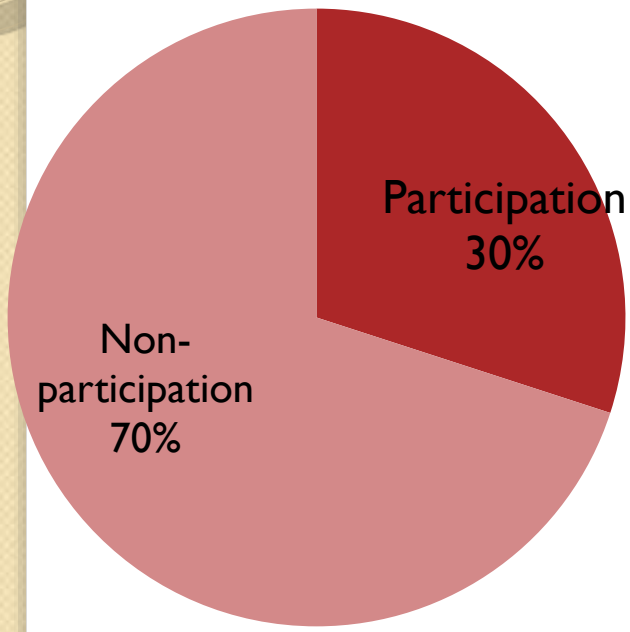
Forms of mangrove forest protection in the study area



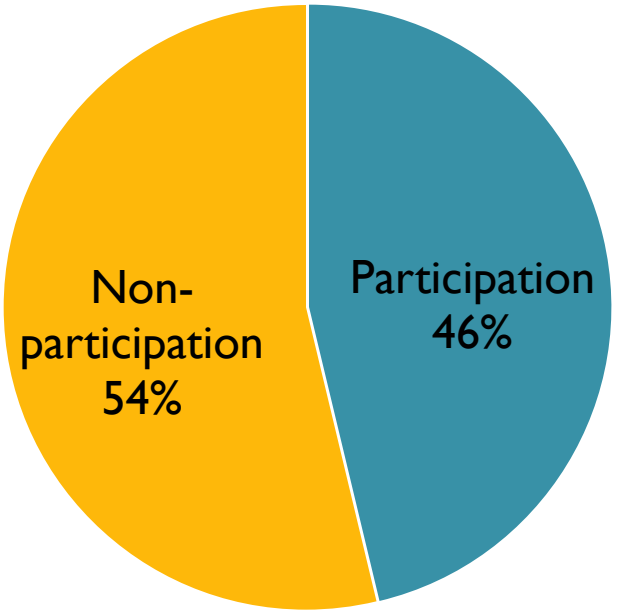
Organizations supporting mangrove management: Commune People's Committee, mangrove planting project and Forest Protection Unit of the district.

4. Gender differences in planting, managing, and protecting the mangroves

Participation in Forest planting



Participation in Forest Protection



100% of women participate in mangrove forest planting.

100% of women are excluded from forest protection.

5. Factors influence producing gendered differences in Mangrove forest management

- Women are excluded from the mangrove protection and management process, due to

  + Differences in gender perception on mangrove management shaping access, marginalization.

  + Labor division by gender.

  + Lack of the women's voice in the community activities

- Lack of involvement of community organizations

- Lack of regulations for common resource use and management.

6. Some conclusions and recommendations

Conclusions

The majority of local people still bases on mangrove forest for their livelihoods.

The proportion of women involved in the cultivation and exploitation of mangrove products is less than men, while women are more dependent on and their exploitation is less destructive.

Mangrove planting has been intensified over the years in Trieu Do and Trieu Phuoc communes. But management activities are still difficult due to lack of regulations for mangrove forest management.

There are still many limitations on the role of women in mangrove management.

Some conclusions and recommendations

- **Recommendations**

Enhancing the participation of community organizations to increase the voice of women and marginalized people

Developing mangrove conservation strategies that consider potential impacts on vulnerable groups such as women when changes occur due to mangrove restoration and development

Producing regulations on forest protection to be able to handle violations causing by both local people and external factors.

Training courses on forest protection and management should involve local people in considering gender issues.

Raising awareness on women's roles in natural resource management. Excluding negative thinking about women‘s predetermined roles such as women can not participate or do well in forest management.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Thank you for your attention!
21/01/2017 15:12

Regional Alumni Meeting "Environment and Health" Challenges and Prospects for South-East Asia

26-28 May 2017 in Hanoi, Vietnam

workshop 3 Rural Development: sustainability-Ecology-Gender

"Ecotourism for environmental conservation of the Songkhla Lake Basin (SLB), Thailand".

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Dr. Utit Sangkarat Faculty of Liberal Arts
Dr. Nutthida Suwanno Faculty of Management Science

UPDATE

ขอต้อนรับเข้าสู่เว็บไซต์สถานวิจัยการจัดการท่องเที่ยวเชิงนิเวศพื้นที่ภาคใต้แบบบูรณาการ

เกี่ยวกับสถานวิจัย

แหล่งท่องเที่ยวเชิงนิเวศภาคใต้

แหล่งท่องเที่ยวเชิงนิเวศเพื่อการเรียนรู้ พื้นที่เกาะสมุย (๑ : 12)

ดูทั้งหมด

ผลงานสถานวิจัย

ผลงานวิจัย

โครงการศึกษาข้อมูลเพื่อจัดทำเส้นทางท่องเที่ยวเพื่อการเรียนรู้ พื้นที่เกาะสมุย จังหวัดสุราษฎร์ธานี

เป็นการดำเนินโครงการเพื่อส่งเสริมให้มีเรื่องราวแหล่งท่องเที่ยวที่เป็นมิตรกับสิ่งแวดล้อมและแหล่งเรียนรู้ระบบนิเวศทางทะเลในเกาะสมุย จังหวัดสุราษฎร์ธานี และรณรงค์และการตื่นการมีส่วนร่วมของผู้มีส่วนได้ส่วนเสียในเกาะสมุย ให้ตระหนักและมีจิตสำนึกในการช่วยกันรักษาสิ่งแวดล้อมและระบบนิเวศทางทะเลของแหล่งท่องเที่ยวให้คงอยู่ (๑: 3)

โดย : rc-ecosouth

ดูทั้งหมด

ผลงานเผยแพร่

A Pattern Of Rural Tourism In The Songkhla Lake Basin, Thailand (๑:9)

โดย : Prachyakorn Chaiyakot, Parichart Visuthismajarn

หน่วยงาน : Prince of Songkla University, Thailand

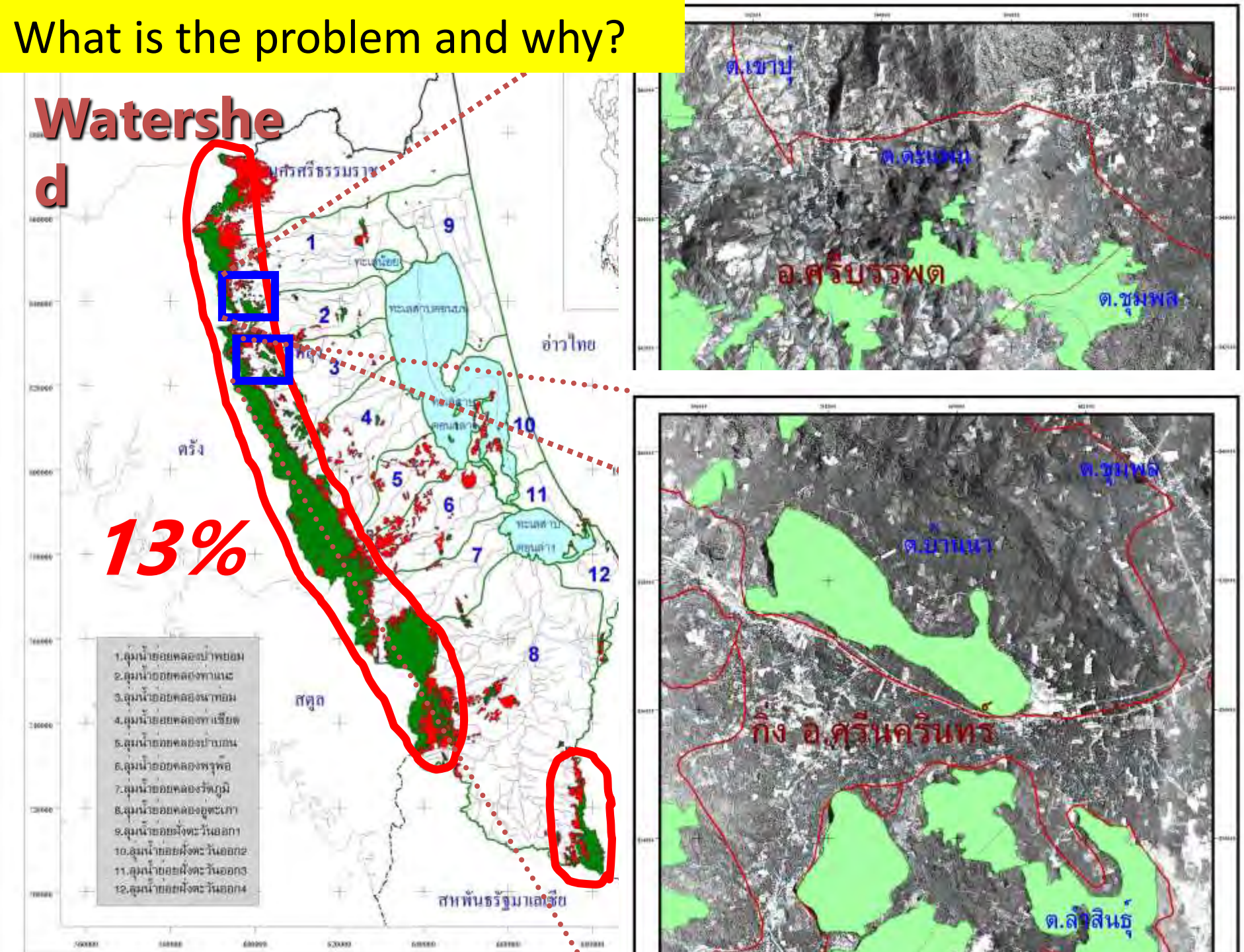
Herbal Garden Tourism Development in Thailand: A Case Study (๑:6)

โดย : Prachyakorn Chaiyakot, Parichart Visuthismajarn

หน่วยงาน : Prince of Songkla University

ดูทั้งหมด

What is the problem and why?



What has been done about it?

Master Plan of Songkhla Lake Basin Development

1. To develop a master plan for Songkhla Lake Basin development.
2. To design approaches to implementation of the plan and to develop a cooperative plan.
3. To encourage community in development of conservation direction and sustainable improvement of quality of life and environment.

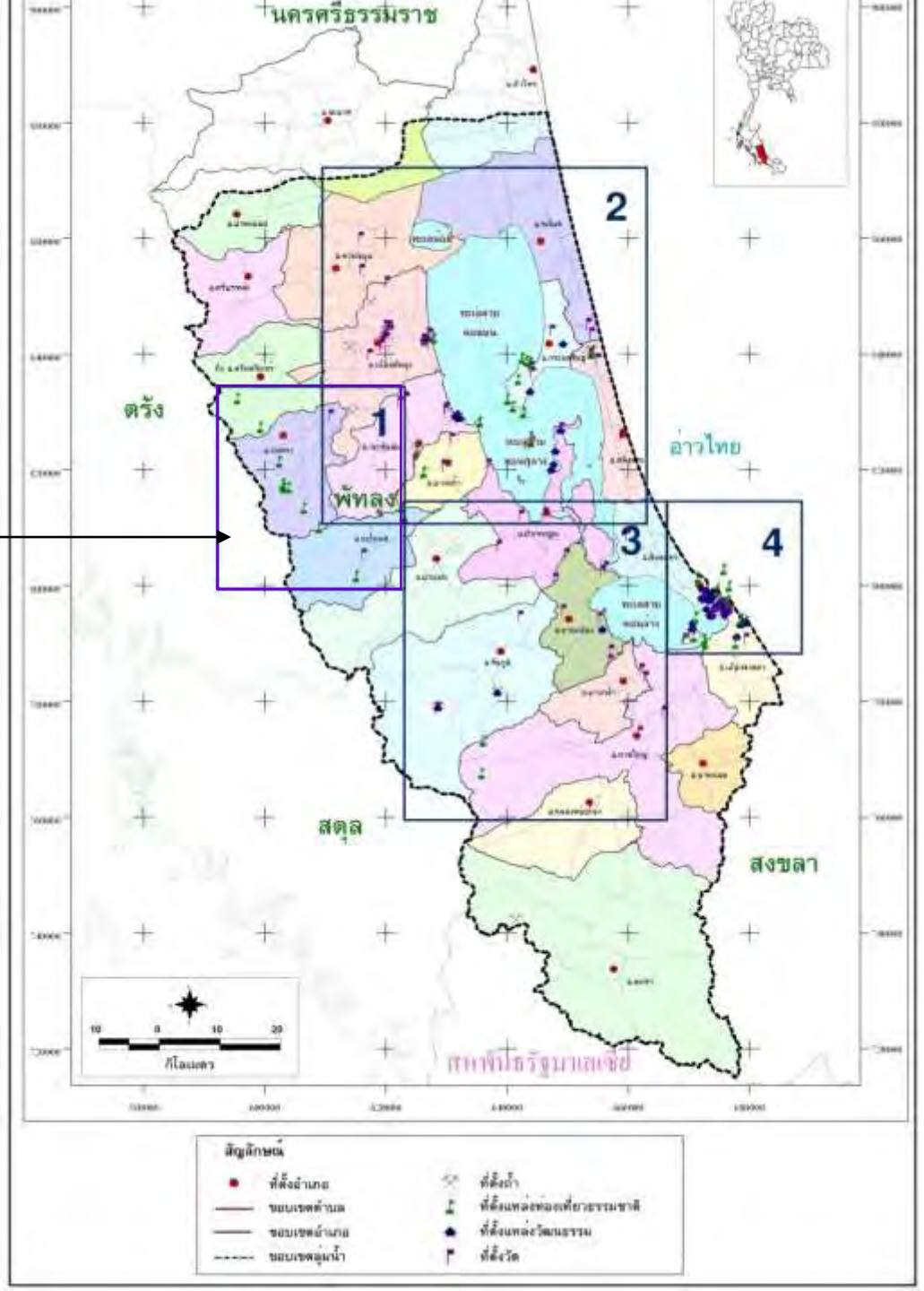
Ecotourism : alternative sources of income

Prince of Songkla University

Taksin University

Tourism resources survey :
212 tourism sites

- **79 natural tourism sites**
- **133 archeological, historical and cultural tourism resources**



What is the presenter doing (or has done)? a

- **Strengthening human capital** for sustainable development by ecotourism learning and networks around the lake.
- **Output of research to community outreach**
  - Consolation regional best prize by the National Agricultural Innovation Contest with villagers in 2016 by the Office of Science and Technology.
    - Project of connecting shoot of pepper jack in related to Agri-Eco tourism in Khuan Kaeng swampy, Tha Samet sub-district, Songkhla Lake Basin (SLB), Thailand

What additional value does the presenter's approach provide?

- 3V's human capital by Prof.Dr.Chira Academy.
  - Value added.
  - Value diversity.
  - Value innovation
- Thailand 4.0 (Agritourism)
  - The project will help address these issues by investigating the feasibility of sustainable community-based ecotourism as a means of raising awareness about the importance of the natural environment of the Songkhla Lake Basin and supplementing the income of local people through ecotourism-related activities.

Where do we go from there?

- Ecotourism for poverty.
- The purpose of ecotourism is to help visitors learn about the environment and culture of the areas they visit, whilst at the same time bringing benefits to the local environment and communities. Proposals for ecotourism activities will therefore meet the following criteria:

  - The local community should decide whether or not they wish to invite ecotourist visitors, and the number of visitors should be controlled by the local community,, within the limits of the carrying capacity of the area.

  - Visits should not take place at times or to areas where there will be a significant impact on the wildlife and environment of the lake.

  - Benefits from tourism should be spread fairly through the local community


Love Lake
Tour Lake
Perserve Our Lake