



Applied Period (AP) Presentation

Developing Biofuel Proposal

BIOFUEL FROM FORESTS: OPPORTUNITIES IN BENEFITING LOCAL LIVELIHOODS?
Four Explorative Case Studies from South East Asia and East Africa Regions

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Introduction

Project

- About Biofuel
- About Proposal

Other Activities

Result

Introduction

Program	: Applied Period
Venue	: Institute of Forestry Economics, Faculty of Forestry Albert Ludwigs University Freiburg
Time	: October - December 2007
Project	: Developing Biofuel Proposal
Supervisor	: Dr. Achim Schluter



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Why Biofuel?

- Growing demand of energy
- Climate change issue





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Biofuel Potentials

1. Energy Security

- High oil prices, uneven global distribution of oil supplies, uncompetitive structures governing the oil supply and a heavy dependence on imported fuels

2. Poverty Reduction and Rural Development

- Create employment, increase living standard
- Open to women to be involved

3. Environmental Benefits

- Reduce GHG emissions and minimize climate change
- Help land restoration



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Somehow, There Are Concerns...

1. Land Use and Food Security

- Competition between fuel vs. food
- Drive food prices up

2. Environmental Effects

- The expansion of mono-cropping is linked to biodiversity loss
- The use of agrochemicals and heavy machinery can contribute to soil erosion, increase drought risks, and affect local biodiversity
- Produce GHG emissions during their manufacture

3. Labor and Human Health

- Only for low-skilled seasonal workers -who are often migrants- who are vulnerable to forced labor, child labor, and dangerous working conditions
- The inappropriate use of chemical materials will also influence the health condition of workers



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A solution: 2nd Generation of Biofuel

According to those concerns, it is now started to develop second generation biofuel which is derived from any cellulose material, enabling the large scale conversion of non-food products. One of the most widely known is Jatropha.



Jatropha curcas



Jatropha fruit



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2nd Generation of Biofuel

Advantages

- Have a higher potential to reduce GHG
- Feedstock is much more abundant than food crops so that there will be no competition
- Require less agrochemical materials
- Reduce land degradation

Disadvantages

- Normally require large scale plantations
- High investment



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Biofuel in South East Asia and East Africa

Why?

- Abundant land resources which is also available for biofuel production from timber
- Suitable climate condition
- Support from the government
- Existing biofuel project



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Biofuel in South East Asia

Indonesia

- Indonesia has large unproductive areas (up to 50 million Ha) which might be partly used as Jatropha lands
- Indonesian government has already set up national policies and plans to regulate the biofuel production

Concern:

- Suitability of Jatropha to the various soil types, right planting method, right harvesting and handling process, and the right technology
- Huge development cost



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Biofuel in South East Asia

Thailand

- Among biofuel resources, wood supplies and new wood plantations contribute the highest biofuel production potential which is 32.4 billion liters per year
- The Thailand government has created a supporting environment for biofuel development

Concern:

- Farmers are reluctant to grow Jatropha because the market is not so large



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Biofuel in East Africa

Tanzania

- Supported by Tanzanian natural resources which have a number of suitable regions exist with the right soil, climate and potential irrigation
- Less than 6% of arable land is currently utilized and more than 160,000 hectares suitable for Jatropha production
- Supported by Tanzanian government and international donors
- Tanzania is a secure and favorable business place



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Biofuel in East Africa

Zambia

- Zambia has some 58 million hectares of potential arable land
- The country's farmers currently use 5.2 million hectares of this land
- Zambia has excellent agro-ecological conditions for a range of crops
- Support from government

Concern:

- Local farmers think that Jatropha has a tendency to overgrow other vegetation which can cause serious environment problems



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Title:

Biofuel from Forests: Opportunities in Benefiting Local Livelihoods?

Four Explorative Case Studies from South East Asia and East Africa Regions

Chapter:

- I. Rationale
- II. Objectives
- III. Research Questions
- IV. Methods
- V. Theoretical Background
- VI. Outputs
- VII. Expected Outcomes



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Chapter I. Rationale

- Mention the main principles and idea of the project.
- It is the reason behind and the explanation of the point of the project.
- In this section, it is mentioned why biofuel becomes a serious issue at this moment, in what area the project will focus on, what reasons of conducting the project in South East Asia and East Africa are, and the information about the case study countries which are Indonesia, Thailand, Tanzania, and Zambia.

Chapter II. Objectives

- Mention about the goals of the project intended to be attained.
- The objectives are to characterize the status and study the perspectives of biofuel production from forests in East Africa and South East Asia and to point out to the socio-developmental threats and opportunities of a substantially increased production.



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Chapter III. Research Questions

- Mention what specific questions must be solved in order to achieve the objectives. It acts as guidelines behind the project, so that it must be accurately and clearly defined.
- There are four research questions in this projects which are questioning about biofuel potentials; socio-economic benefits, challenges, and risks; institutional changes needed; and policies to be considered to promote equitable development opportunities for the poor.

Chapter IV. Methods

- Mention the systematic way to conduct the project and it implies an orderly logical arrangement.
- There will be identification of biofuel potentials; socio-economic benefits, challenges, and risks; institutional changes needed; and policies to be considered to promote equitable development opportunities for the poor.



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Chapter V. Theoretical Backgrounds

- Mention the theoretical information that is essential to understanding a situation or problem in the biofuel development especially in relation to the poor.
- The studies draw basically on two strains of literature. On the one hand this is in a broad sense the institutional economics literature and on the other hand the theoretical literature developed around environmental justice.

Chapter VI. Outputs

- Mention what quantitative information will be produced after the project is done.
- There will be two outputs from this projects which are research papers from each regions (South East Asia and East Africa) and technical studies on policies and institutional structures as well as policy guidelines.



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Chapter VII. Expected Outcomes

- Mention expected achievements which the project is designed to accomplish.
- The expected outcomes of the project is diverse actors in the forestry sector are aware of how policies, institutional practice and informal social behaviors structure patterns of benefits capture from emerging opportunities in the biofuel industry. They are also able to draw concrete lessons for the policies and practices of their respective ministries, organizations and communities.



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Other Activities

- Joining IFSA Meeting
- Field Trip to Black Forest: visiting Forestry Museum, vineyard plantation, and wine production
- Visiting Forest Research Institute of Baden Württemberg (FVA)
- Attending Post Graduate Students' Colloquium
- Exploring Freiburg and small towns around



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- I learned so many things, especially about biofuel and its development in South East Asia and East Africa regions
- It was not that easy to make a good competitive research proposal. Somehow, I also learned how to make a successful project proposal from my Supervisor.
- German Federal Ministry for Cooperation and Development (BMZ) closed the “Open” call for proposals due to high levels of interest and depletion of funds. Therefore, we are now trying to contact some funding institutions.

Thank You...

Any Question?