

The Sustainability of Agricultural Practices

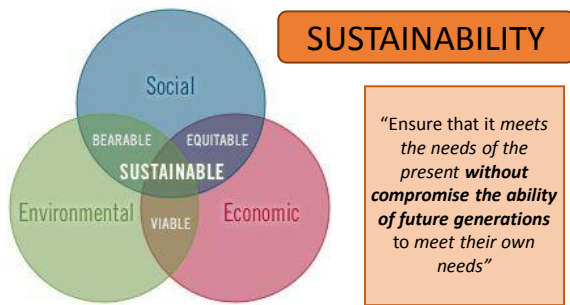
Study Case in Three Different Location:
Cinangneng Village Tourism, Cikasungka Oil Palm Plantation, Tapos Dairy Farm

Group D

- Shizukuda Mai
- Kadekawa Taishi
- Arinal Haq Izzawati N
- Trias Sitaresmi
- Ali Wafa
- Weny Dwi Ningtyas
- Evi Mulyah
- Masrukhin
- Andini Kusumawardhani

International Summer Course Program
Pactical Bioresources & Agricultural Sciences toward Regional Sustainability
Bogor, 18-25th August 2015

Introduction To Sustainable Farm

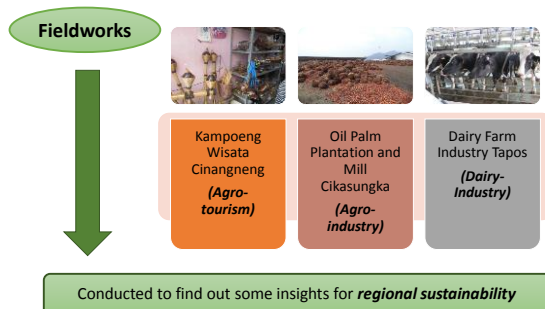


SUSTAINABILITY

Figure 1. Definitions of sustainable development

WHAT IS TO BE SUSTAINED:	FOR HOW LONG? “25 years “How good is the future?” Future”	WHAT IS TO BE DEVELOPED:
NATURE Earth Biodiversity Ecosystems		PEOPLE Global survival Life expectancy Education Equity Equal opportunity
LIFE SUPPORT Ecosystems Water Resources Environment	LINKED BY Only Solidly But And Or	ECONOMY Wealth Production Incentives Consumption
COMMUNITY Cultures Groups Places		SOCIETY Institutions Social capital States Regions

SOURCE: U.S. National Research Council, Policy Division, Board on Sustainable Development, *Our Common Journey: A Transition Toward Sustainability* (Washington, DC: National Academy Press, 1999).



Are They Can Sustain?

A

Kampoeng Wisata Cinangneng

- Establish : 2000, Area : 1.5 ha
- Owner : The tour guide from central java
- Location : Cihideung Udik, Ciampea, Bogor
- Community based "tourism development"
- It is establish to discover and learn about Sundanese culture and its society being the people from the village



Some Problem we found as obstacles for it sustainability

Economically & Social Aspect

- Less employment
- Less society can elaborate with Kampung Wisata
- Many people around just use Sundanese Language
- We can't found any stand for collect the society handicraft

Ecological Aspect

- Some farmer use monoculture farming system
- We can't find the source of snake skin uses, from hunt or reproduction
- Farmer mostly burn their plant residues

Economic:

- The company provide employment for people who live around it
- The company collaborate local people to develop home production
- Increasing income of local people
- Give benefit for both of the company and local communities



Home made of local people in Cinangneng

• Idea for improvement:

- Home industry still need improvement on:
 - on promotion
 - quality control of product
 - effort more people to develop their entrepreneurship so that increase the economic value of product
- The company may develop garden fruits inside of the field
 - make people more interested to visit Kampoeng Wisata
 - educational tourism
 - germ-palsam collection
- Improvement technology on post harvesting, especially utilization of machine
 - By using the technology, the agricultural activities are more effective and efficient

Social:

- Sundanese cultural performance is a good program to socialize and maintain existence of Sundanese culture, but in need the language sco program
- By increasing income of local communities, it will be increased their welfare

Idea for improvement:

- There should be held **community development program** on entrepreneurship, especially about how to increase economic value of product, how to promote, and increasing number and variety of product

Ecological:

- The company have good environmental management. There is no find pollution from the company.
- Farming culture used by local people is monoculture, i.e. farming culture system which only one crop in an area. Monocultural farming system does not give many benefit for the soil.
- **Idea for improvement:**
 - It is better if they use multicultural farming system. The benefit of the farming system are:
 - It is good for microbacterium ecosystem in the soil
 - Nutrient substitution of plants
 - Pest and diseases controlling
 - Burning of waste of plants is not recommended

B PTPN VII Cikungka

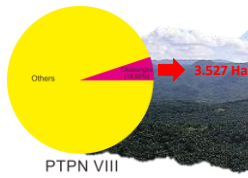


Oil Palm Plantation



Oil Palm Factory

Company Profile



Plantation

Topography	: Wavy to Hilly
Soil type	: Latosol, Podzolik
Height	: 64 – 751 masl
Rain Intensity	: Day of Rain: 141 – 214 day/years Rain Intensity: 2657 – 5664 mm/Years
Soil pH	: 4,5 – 6,0

Factory

- The 2nd Oil Palm Factory owned by PTPN VIII
- Fouded in 4 ha area, with the capacity 30 ton bunch/hours
- Has been operated since October, 2013
- Processing the bunch from: Cikungka, Sukamaju, Tambak sari, Gedeh, Cislak baru



Economic

Current Condition:

the company provide employment to the local people, with the salary based on regional standard of minimum salary

Problems:

- Did not process the kernel to Palm Kernel Oil
- Less employment



Economic

Suggestions:

- More value if sell oil kernel
- Utilization of biotechnology, such as tissue culture for increasing effectiveness of oil palm breeding.



Social Aspect

Problems:

Less collaboration with people around to keep environment

Suggestions:

In order to improve quality of human resources, the company carry on training for the employee, such as on the job training.



Ecological:

Use the waste of oil palm as fertilizer

Use the waste of oil processing as fuel

Problems:

- Did not integrated with other agriculture system (ex. husbandary, etc)
- Empty fruits bunch still abandoned directly without processing first, its harmful, make the intensity of disease and pest attack increase
- Did not utilize of cover crop to control weed and to supply nitrogen to the soil (LCC).



Ecological

Suggestions:

- Integrated plant and animal, such as SSKA (Cattle and Palm oil Integrated System).
- Utilization of cover crop to control weed and to supply nitrogen to the soil (LCC).
- Utilization of waste of oil palm for more benefit product such as feed, mulch, handicraft
- Improving of waste management especially for leaves. Leaves which is put in around the plants will induced diseases and pest. It is need to provide special place to decomposit the leaves to be the manure or put it as the mulch after cut it into pieces.
- Improving technology for safety harvesting (Human Safety).

C PT Rejosari Bumi Farm (Tapos Dairy Farm)

- Found by Soeharto, at 1974.
- The area is around 751 Ha, its an government land.

The Objective of the dairy farm is:

- To manage the unusefull land to more usefull, by utilizing science and technology.
- To provide th egoog breed (bibit unggul), for the husbandry and distribute it to local people.
- To get the profit
- To open the job (employment), reduce unemployed people.

Economic:

Make some integrated between cattle and oil palm.

The benefit which is :



- For oil palm chemical fertilizer decrease
- We can make more employment
- We can make some feed for the animal from waste of oil palm

Sales of the milk still unable to compete with other company because the packaging cost are too expensive.



The company need to increase benefit value of product besides of milk such as cheese, yoghurt, etc.



Society:

The company needed to incorporate with society to keep the green forest



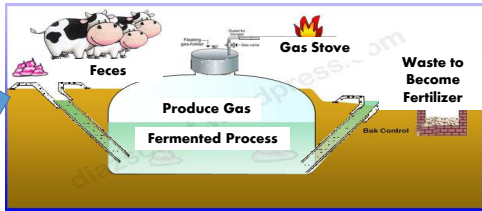
The company need to grow spike plant to maintenance the cattle from the wild animal and the product of the plant can pick up by the people like rotan plant, salak, etc



They need incorporate with student from university and make some "village school" and student can get many experience and knowledge

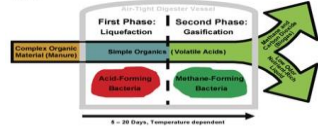
Ecology

Dairy Farm Need a Biogas System



How it works...

BIOGAS



Dairy Farm Need System Solar Panel



They Can Used The Water Tank to Bath a Tub The Cow Before Milking



INTEGRATION IDEA

