



IGES



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Presented to

Agus Susatya

In recognition of his contribution as a speaker of

**“Decarbonization on small scale: Lesson learnt with community through
MULTI STAKEHOLDER PROCESSES: A long way to Self Implementation of
REDD+ at Air Lanang Social forest, Rejang Lebong, BENGKULU”**

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Carrying out the Paris Agreement: Role of research communities in supporting science-based climate policy

held on

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at

Sheraton Bandung Hotel & Towers, Bandung, Indonesia

DR SHUZO NISHIOKA
Secretary General, LoCARNet
Senior Research Advisor, IGES, Japan

**Decarbonization on small scale:
Lesson learnt with community through *Multistakeholder Processes*: A long way to Self
Implementation of REDD+ at Air Lanang Social forest Program, Rejang Lebong,
BENGKULU**

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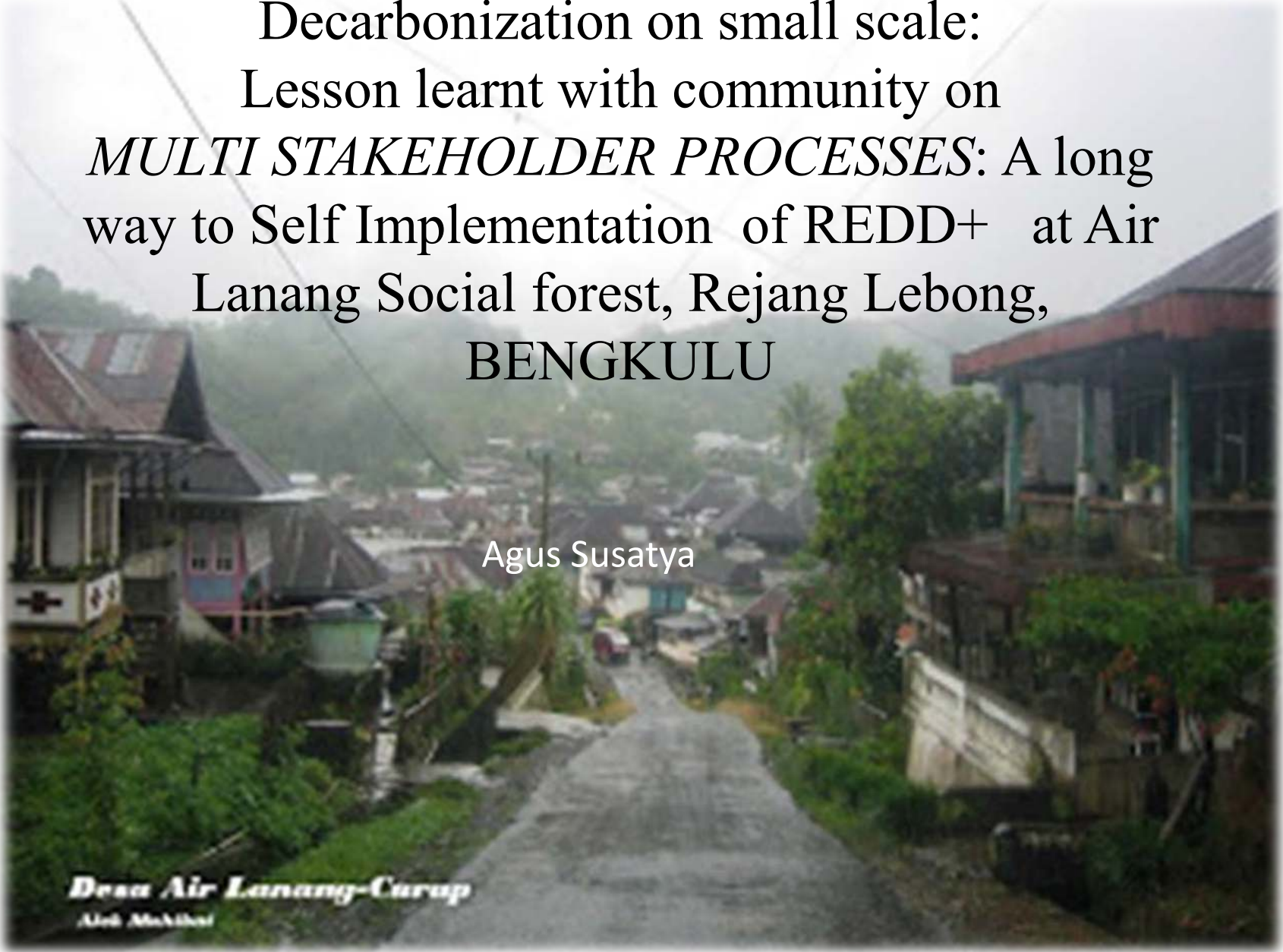
Regional Sumatra Coordinator

Indonesian Networks on Climate Change and Forestry (APIK Indonesia)

Approach to mitigate the impacts of climate change on human life still relies on the success of land use to do sequestration atmospheric carbon and to reduce carbon emission. Decarbonization is a way to keep carbon in immobilized forms in using different methods according to different social, economic, and the advancement of technology of a country. Unlike developed countries, any attempt to introduce mitigation program on climate change, one has to include economic aspects on the program. Social forestry program at Air Lanang, Bengkulu was initially aimed to rehabilitate protection forest, which has been illegally converted into coffee plantation, through agroforestry with enrichment of existing condition with multipurpose trees. However, the result of the program was not as good as expected. Air Lanang Area was within Ulu Musi Watershed Area, and is a part of large social forestry program supported by JICA in early 2000. The last five years, we tried to help the Air Lanang community to refresh the program with different methods with limited funds. We used multi stakeholder partnership (MSP) approach including rich picture, stakeholder and scenario analysis, road map, to carry out the methods. The basic idea of MSP was to facilitate the community to aware human's welfare was defined by quality of environments, and to increase the participation of the program. We adopted REDD+ approach to enrich carbon reserve, to reduce carbon emission, to restore hydrology, and to increase the community's welfare. Through time, it was rather difficult to run the approach initially not only because of limited fund, but also it was hard ask coffee growers to join the programs. We learnt from the interaction with community that using the REDD+ related terminologies would likely end up to the reluctance of the coffee growers to join to the programs. To

gain their trusts, we abandoned the terminologies, and used jargons, which was understood by the growers. In order to the program was succesful, we used prosperity or economic approach first, then was followed by ecological approach. We with long discussion with coffee growers finally decided to enrich the area with nutmeg trees which have highly economic values and were able to sequestration carbon well. Because of positive responses from the farmers, then we carried out community capacity buildings through nutmeg nursery trainings. The positive results of these programs was shown by their abilities to establish nursery, and to produce nutmeg seedlings, and generate household incomes. From ecological aspects we succesful introduced so called Tree card, which contained the number of trees for each farmers. We are right know mapping of each trees with GPS. Both tree card and tree mapping will be further developed into Tree Information System (TIS). The heart of TIS was to make the data for land based or land use management measurable, accountable, and transparant for carbon accounting as well as for estimating environmental services. The program has been in an initial stage for a long way to perfect implementation of REDD+. We do not expect to be allways succesful, but any failures were considered as steps to do a better approach.

keywords: carbon, climate change, mitigasi, multistake holder analysis, REDD+, social forestry.



Decarbonization on small scale:
Lesson learnt with community on
MULTI STAKEHOLDER PROCESSES: A long
way to Self Implementation of REDD+ at Air
Lanang Social forest, Rejang Lebong,
BENGKULU

Agus Susatya

Desa Air Lanang-Curup

Alif Makhid

LANDSCAPE BUKIT DAUN REGISTER 5 (2.068 HA)

ULU MUSI Water catchment Area

UJAN MAS Social Forest (319 HA)

HKM TANJUNG ALAM SF (450 HA)

HKM AIR LANANG SF (348 HA)

UJAN MAS hidro power

All financed and supported by JICA at early 2000



**Programs At Air Lanang Social Forestry
(formerly Protection Forest)
Initiated early 2000 by Indonesian Gov with support
JICA**

REHABILITATE PURE COFFEE PLANTATION AT FORMERLY PROTECTION FOREST INTO MORE ENVIRONMENTAL SOUND FOREST MANAGERMENTS THROUGH INTRODUCING AGROFORESTRY SYSTEM AND CALLED IT AS SOCIAL FORESTRY PROGRAM

HOWEVER, IT DID NOT WORK WELL AS INDICATED BY LOW NUMBER OF MULTIPURPOSE TREES PER HA, WHICH WERE FAR LESS (314 TREES/HA FROM IDEAL CONDITION 411 TREES/HA

Sistim Agroforestry at Air Lanang Social Forestry



Coffee + Multi purpose trees (mpts)
(Durian, Bettle nut trees,)

- a. Ideal condition : 411 MPTS trees/ha (ENCUM 2010)
- b. Reality: farmers planted far less than ideal (average 314 trees)



MPTS/HA	Number of growers (%)
a. < 200 trees	18.41 %
b. 200-400 trees	51.97 %
c. > 400 trees	29.61 %
Average =413 trees	

IMPLEMENTATION OF REDD+ AT SMALL SCALE with OBJECTIVES

- A. Restoring ecosystem functions of Coffee Plantation formerly Protection Forest**
- B. Restoring hydrological functions**
- C. Increasing villagers' welfare**
- D. Implementing REDD+ with self financed at mikro scale**
- E. Saving and protecting livelihood at watershed area**

METHODS

1. STAKE HOLDER ANALYSIS
2. SCENARIO ANALYSIS

STAKE HOLDERS

Agriculture, plantation,
And forestry gov offices



KETAHUN Watershed
Management office (KWMO)



NGO



Bukit Daun Watershed



Coffee growers

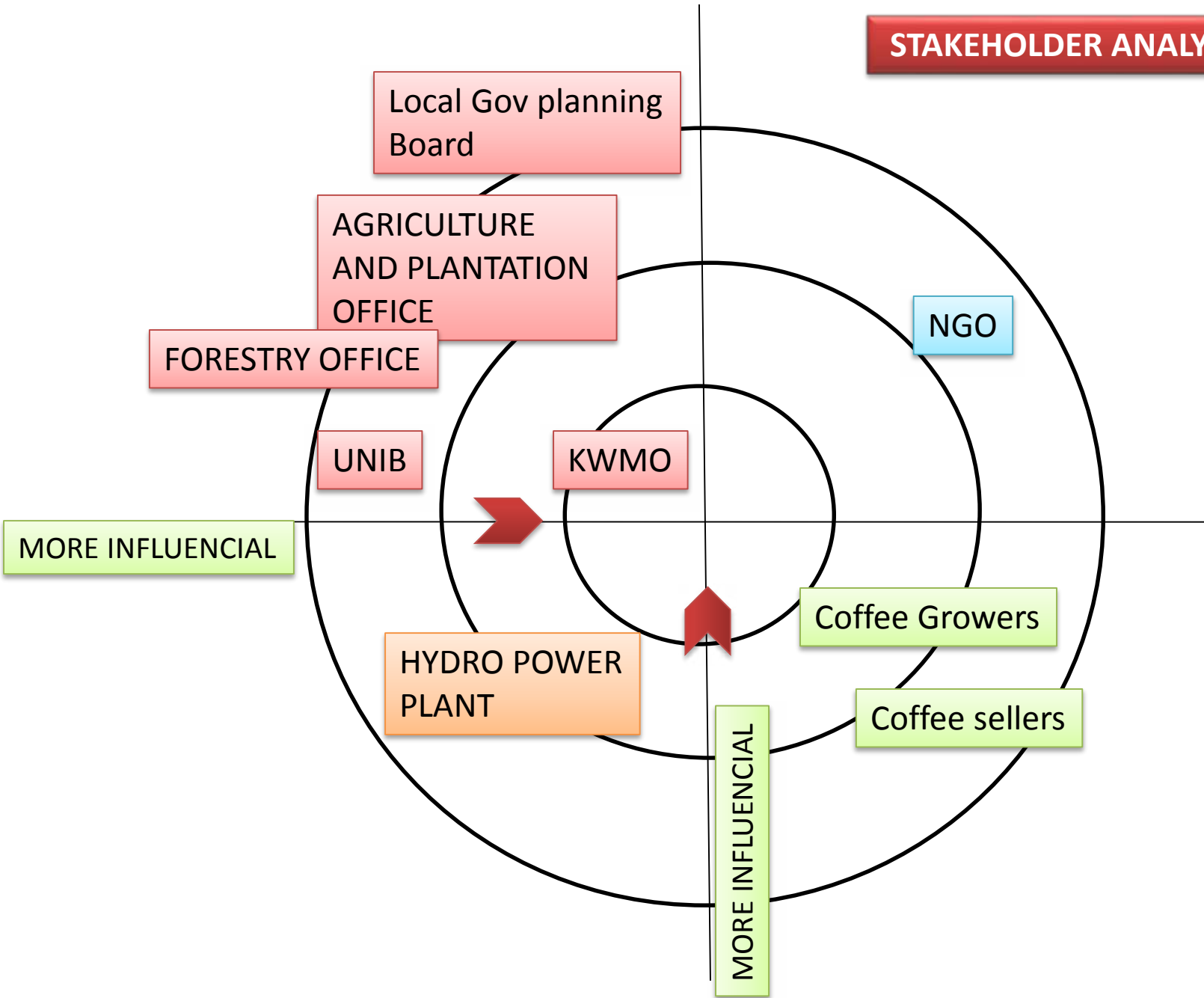


University of Bengkulu



Hydro electric power plant

STAKEHOLDER ANALYSIS



Scenario Analysis

HIGH

- a. Poor community with low food security
- b. High conflicts between community and gov on land tenureship
- c. Social unrest
- d. Bad hydrology functions
- e. Degraded environment

- a. Community careless to the REDD+ Program
Due to more stable house hold economics
- b. No synchronization between gov programs on Social forestry and the needs of community

LOW

LIVEHOOD

HIGH

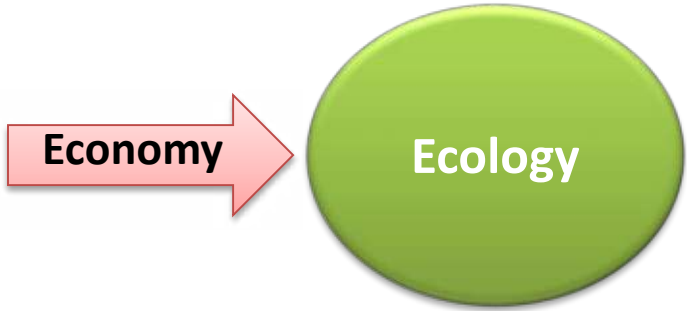
- a. High community participation to the program
- b. Insignificant effects on community welfare from the programs
- c. Low government supports

Top down Policy

- a. High participation community with supports
From government
- b. Choices for MPTS based on economic, ecology,
- c. Alternative household incomes, besides coffee
- e. High acceptibility of Agroforestry system

LOW

Progress on Capacity building on Farmer group



Select MPTS Nutmeg trees
Training on Nutmeg nursery (2009)



Provide seedlings (6000 sdling) (2013)

Farmer group

Farmer Group

Nursery

Nursery



Self providing seedlings,
Income generatings

**ROAD MAP
REDD+ ON SMALL
SCALE
SELF FINANCED**

Technical training on
AGROFORESTRI (2016-
2018)

Technical training
On product
diversification on
cooffee (2016-2017)

Capacity building
on
Farmer coop or
group (2016-2019)

TRAINING
ON NUTMEG
NURSERY
(2009)

Traning on
nursey
management
(2014)

Technical
training on
products of
Nutmeg (2015)

Marketing
(2018-2019)

**TUJUANN
JANGKA PANJANG**

**FIELD
SCHOOL
ON Social
forestry
AIR
LANANG**



**RESTORING
Carbon
Hydrological
function
INCREASING
COMMUNITY
WELFARE**

System Information
trees
(2015)

Infrastrucure development
2016-2017

Tree mapping with
GPS (2016-2017)

marketingEnvironmental
services
(water and caarbon)
(2018-2020)

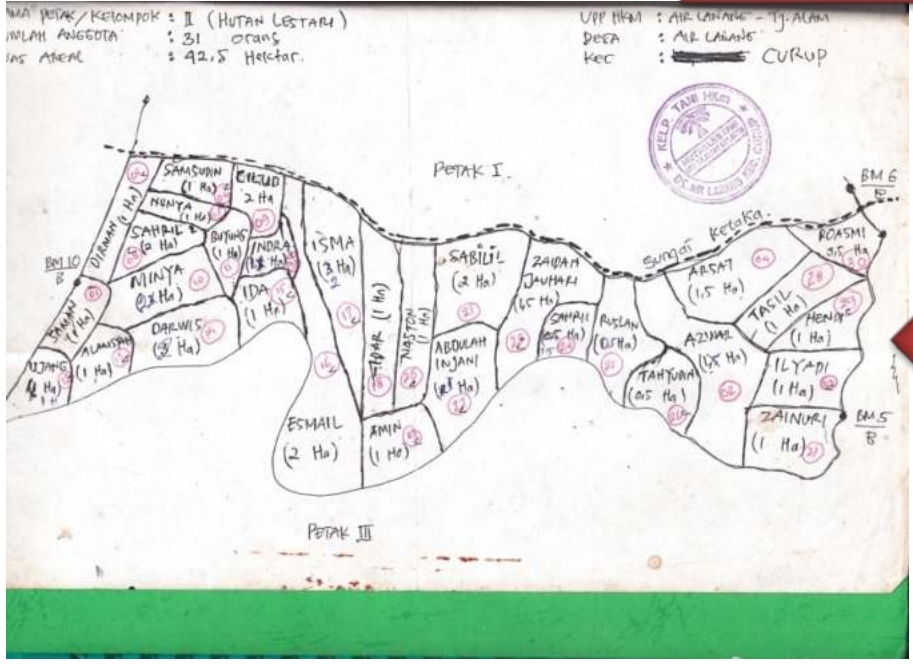
COLOR CODE

CAPACITY BUILDING
Human resource/ farmer
groups

DATA BASE development for REDD+
purposes; Measureble, accuntability,
transparency

**PENGEMBANGAN
SARANA**

Tree System Information (BIOMASS/CARBON)



KARTU PENGEMBARAN POHON HIRI

Tahun Pengukuran 2013

Nama Anggota : _____
 Nama Petak HIRI : _____
 Desa : _____
 Kecamatan : _____
 Kabupaten : _____

No.	Nama Jenis	Tingkat Pertumbuhan dan Jumlahnya			Keterangan
		Stem	Daun	Pohon	
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					

Vi. Lamang, Januari 2014

Meskipun, _____
 Kepala Desa Vi. Lamang _____
 Sumber Rejeki _____
 (M. Nur Komi) _____
 (Dawid Satrio)

Tahun Pengukuran 2014

No.	Nama Jenis	Tingkat Pertumbuhan dan Jumlahnya			Keterangan
		Stem	Daun	Pohon	
1					
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9					
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Vi. Lamang, Januari 2013

Meskipun, _____
 Kepala Desa Vi. Lamang _____
 Sumber Rejeki _____

Tree mapping with GPS

Tree carts

MEASURABLE, ACCOUNTABLE, TRANSPARENT FOR REDD+ AND ENVIRONMENTAL SERVICES (CARBON AND WATER) PURPOSES