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IMPACTS OF RSPO CERTIFICATION ON LIVELIHOOD & SUSTAINABILITY

*Evidence from Independent Smallholders in
East Malaysia*




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Outline

- ☐ Background
- ☐ Rationale
- ☐ Objectives
- ☐ Methodology
- ☐ Results & Findings
- ☐ Conclusions and Recommendations
- ☐ Acknowledgment





Background

- ❑ In Malaysia, smallholder farms cover about 38% of the total area of oil palm cultivation.
 - **Organized smallholders – 24%**
 - **Independent smallholders – 14%**
- ❑ Independent smallholders' average farm size – **2.6 ha**
- ❑ Average annual yield of independent smallholders - **17 tons/ha**



Rationale

- ❑ Smallholders should not be left out of the global certified sustainable palm oil (CSPO) market.
- ❑ Little is known about the changes that RSPO certification has brought to smallholder's livelihood.
- ❑ Important to understand the smallholders' underlying motivation in adopting RSPO and also the challenges and barriers they encounter.



Objectives

To examine the impacts of RSPO adoption on independent smallholder's livelihoods within the sustainable development spectrum.

SOCIAL

ECONOMIC

ENVIRONMENT



Methodology

- ☐ Locations
- ☐ Data collection
- ☐ Samples
- ☐ Data Analysis



Methodology

☐ Locations

- *10 longhouses in Bintulu, Sarawak, Malaysia*
- *10 villages in Telupid/Beluran, Sabah, Malaysia*

☐ Data collection

☐ Samples

☐ Data Analysis



Methodology

- ☐ Locations
- ☒ **Data collection**
 - *Questionnaire interview.*
 - *Started on 15th March and completed on 27th March 2015 in Sarawak.*
 - *Started on 29th July and completed on 14th August 2015 in Sabah.*
- ☐ Samples
- ☐ Data Analysis



Methodology

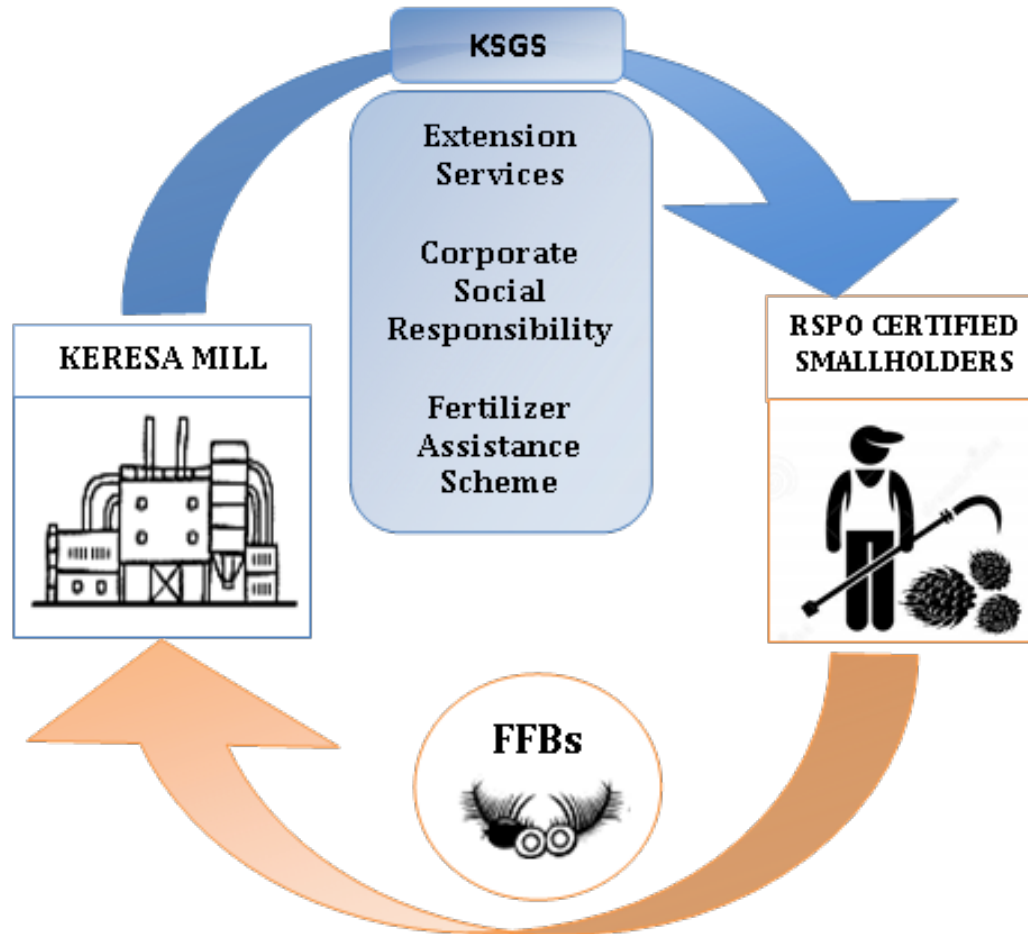
- ☐ Locations
- ☐ Data collection
- ☒ **Samples**
 - *76 respondents were interviewed in Sarawak (Keresu).*
 - *100 respondents were interviewed in Sabah (Sapi).*
- ☐ Data Analysis



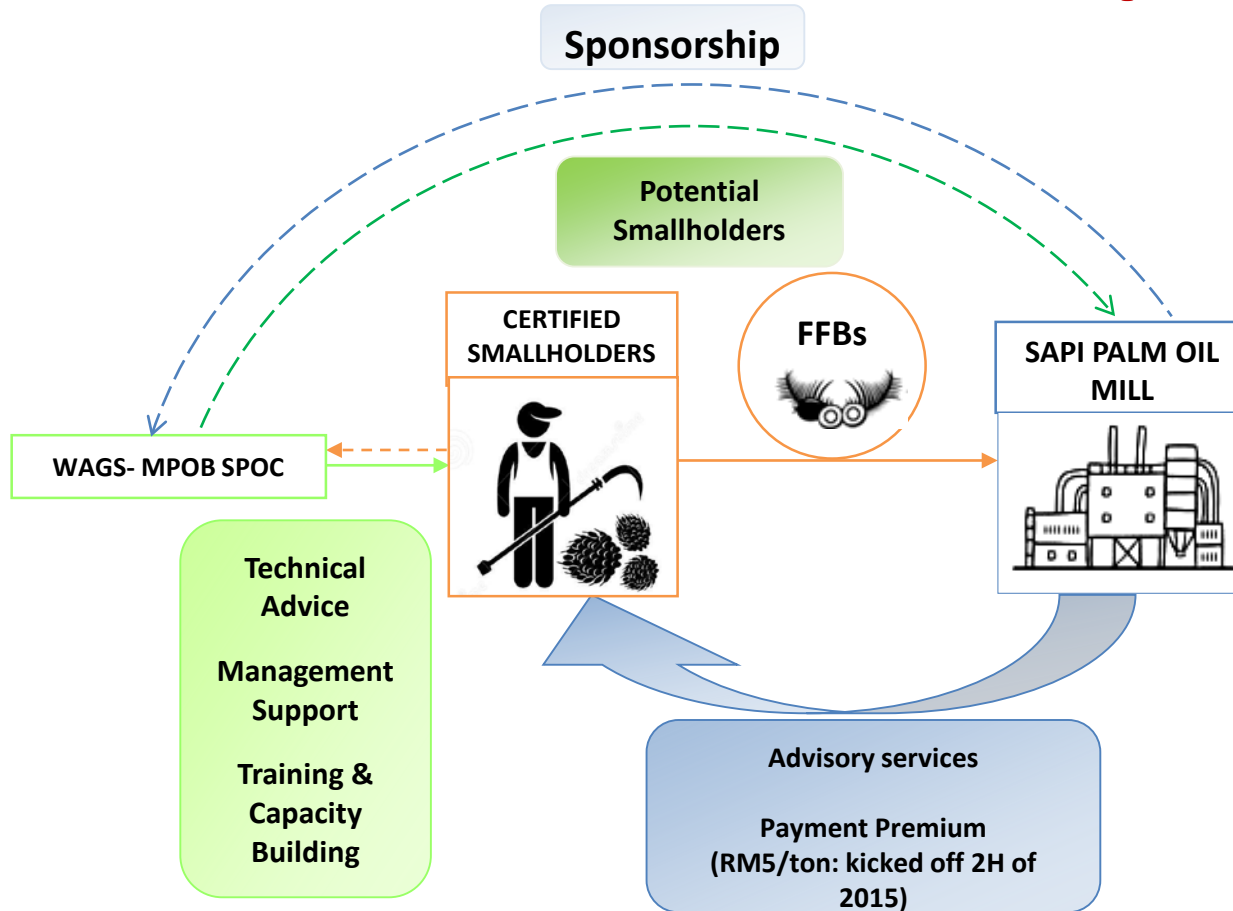
Methodology

- ☐ Locations
- ☐ Data collection
- ☐ Sampling
- ☒ **Data Analysis**
 - *Basic statistics*
 - *Indices*
 - *OLS Regression*

Social Structure in Keresas



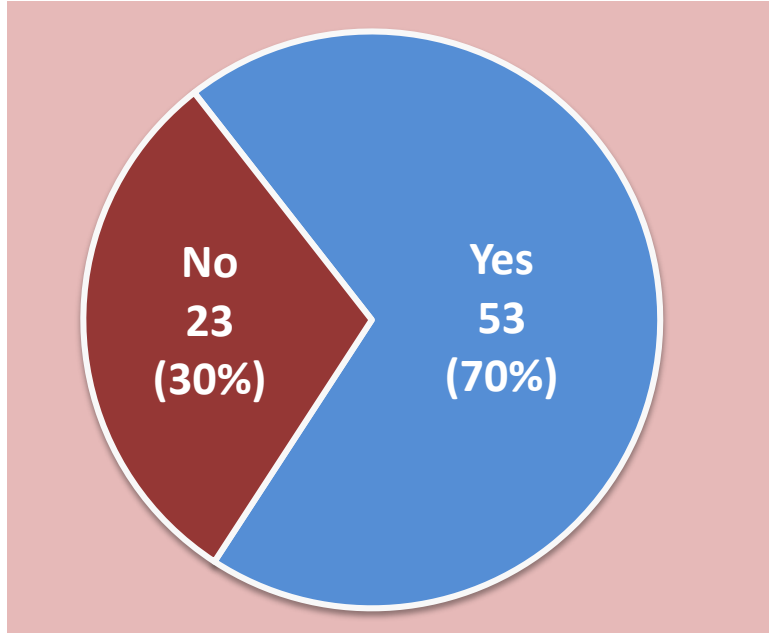
Social Structure in Sapi



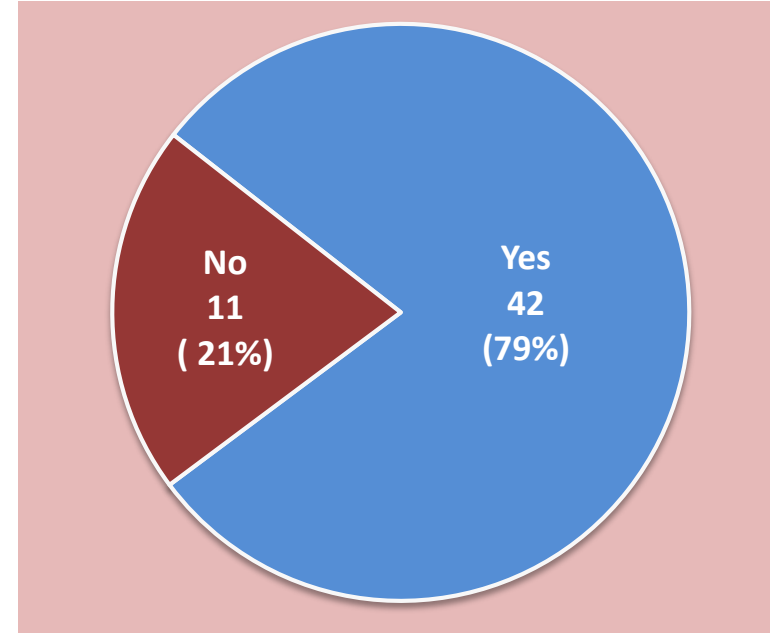
Background of respondents

Variable	Mean	
	Keresas	Sapi
Age of Household Head	55 years old	53 years old
Household Size	6 persons	7 persons
Farming Experience	8 years	17 years

RSPO Awareness - Keresesa

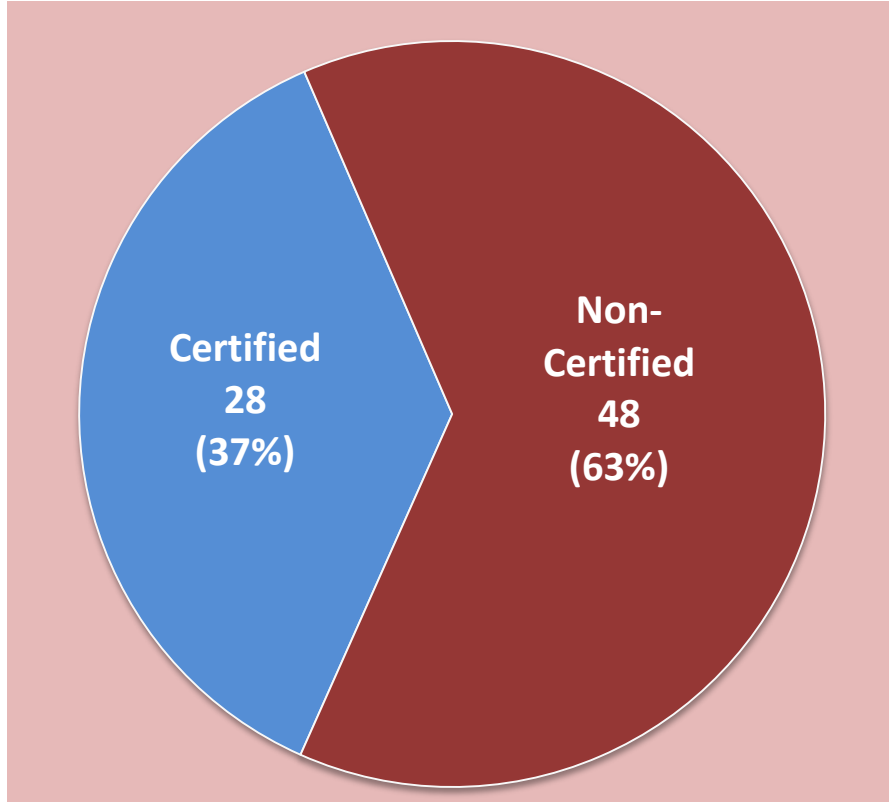


70% have heard of RSPO previously as early as 2009.



79% have applied for the RSPO certification.

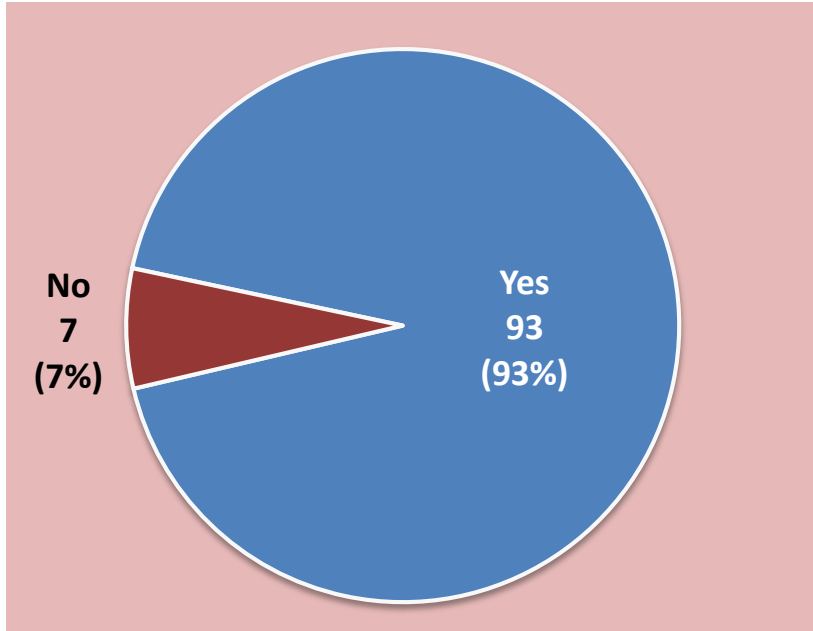
RSPO - Keresia



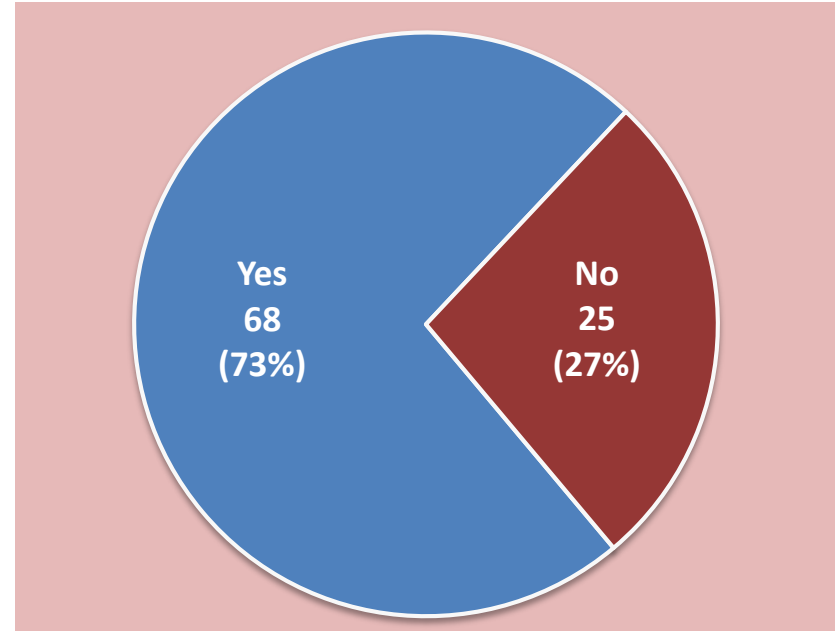
37% of respondents have achieved RSPO certification.

- ***The first group of independent smallholders in Malaysia certified by RSPO.***
- ***Certified in 2010 and 2012.***

RSPO Awareness - Sapi

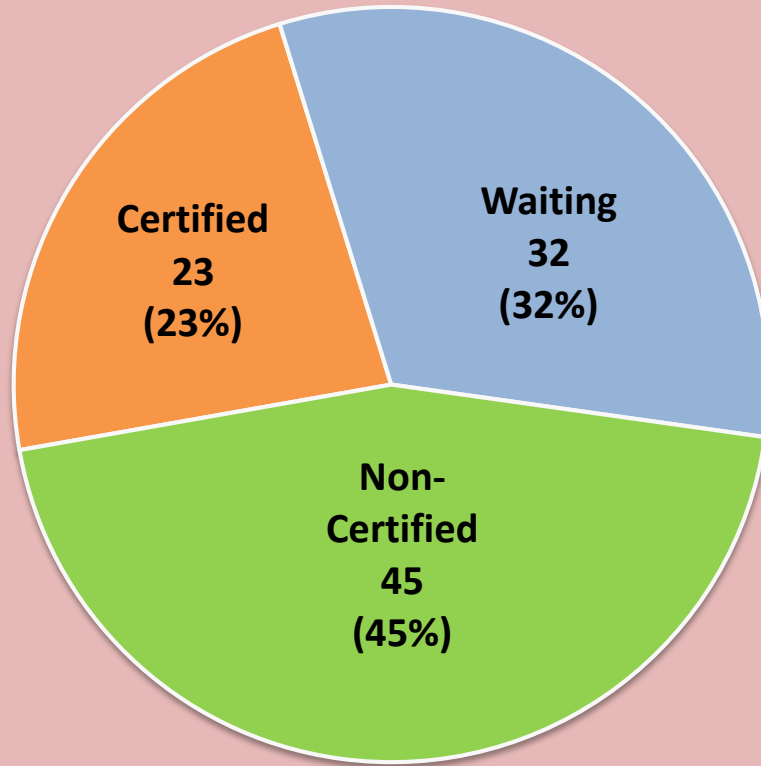


93% have heard of RSPO previously as early as 2013.



73% have applied for the RSPO certification.

RSPO - Sapi



23% of respondents have achieved RSPO certification.

- ***The first group of independent smallholders in Telupid/Beluran, Sabah certified by RSPO through Wild Asia Group Scheme (WAGS).***
- ***The certified smallholders are from Kampung Ulu Sapi and Kampung Toniting.***
- ***Certified in 2014.***

RSPO Awareness

The main motivations to apply for RSPO certification are to:

- Sell their fresh fruit bunches (FFBs) at premium price;
- Improve their farm yield;
- Manage their farm(s) more efficiently;
- Learn about sustainable farming practices; and
- Improve their household income.



Farm Profile

Total Hectarage in Keresas & Sapi

Mean Total Land Size (ha)			
Keresas		Sapi	
Certified	Non Certified	Certified & Waiting	Non Certified
6.64	3.49	5.01	4.84
$\bar{x}_C - \bar{x}_{NC}$			
$t(69) = 3.976,$ $p = 0.000$		$t(88) = 0.444,$ $p = 0.658$	

Farm Profile

Annual Application of Agricultural Inputs by Smallholders in Keresas & Sapi

Agricultural Input	Annual Application of Agricultural Inputs			
	Keresas		Sapi	
	Certified	Non Certified	Certified & Waiting	Non Certified
Pesticide/Herbicide (L/ha)	6.6	13.8	7.7	13.6
$H_0: \bar{x}_C - \bar{x}_{NC}$	$t(70) = -3.353, p = 0.000$		$t(89) = 3.514, p = 0.001$	
Fertilizer (kg/ha)	196.5	160.7	326.9	263.4
$H_0: \bar{x}_C - \bar{x}_{NC}$	$t(60) = 1.228, p = 0.112$		$t(87) = -0.985, p = 0.328$	

Farm Profile

Percentage of smallholders who have attended agricultural input training programs & training index in Keresas & Sapi

Agricultural Input	Keresas		Sapi	
	Certified	Non Certified	Certified & Waiting	Non Certified
Seed	7 (27%)	12 (27%)	59 (87%)	7 (22%)
Fertilizer	22 (85%)	27 (59%)	61 (90%)	8 (25%)
Pesticide	5 (20%)	12 (27%)	59 (87%)	8 (25%)
Herbicide	23 (85%)	24 (52%)	61 (90%)	8 (25%)
Training Index	2.12	1.61	3.53	0.97
$H_0: \bar{x}_C - \bar{x}_{NC}$	$t(67) = 1.384, p = 0.086$		$t(98) = 8.49, p = 0.000$	

Storage facilities for chemical inputs in Keresas & Sapi

- ❑ The percentages of smallholders with pesticide/herbicide and fertilizer storage facilities are higher among the certified smallholders/waiting for certification.
- ❑ Some smallholders do not have designated storage facilities for pesticide/herbicide.
 - *They only buy inputs in small quantity, as needed for one-off application.*



Storage facilities for chemical inputs in Keresas & Sapi

- ❑ The percentages of certified smallholders and those waiting for certification with chemical inputs storage facilities are higher than the non-certified ones.
- *The facilities are clearly marked with proper labeling and secured.*



Social Impacts of RSPO Certification in Keresia

Perceived social benefits of RSPO certification by smallholders in Keresia

- ❑ Perceived social benefits of certification are higher among certified smallholders.
 - *Largely derived from Keresia Plantation's goodwill to improve the current state of sustainable development among local communities.*



Social Impacts of RSPO Certification in Sapi

Perceived social benefits of RSPO certification by smallholders in Sapi

- ❑ Perceived social benefits of certification are higher among those waiting for certification compared to the certified ones.
 - *They perceive that they are going to enjoy various social benefits upon getting RSPO certification.*



Environmental Impacts of RSPO Certification in Keresia & Sapi

Perceived environmental benefits of RSPO certification by smallholders in Keresia & Sapi

- ❑ **Environmental impact index** for both certified smallholders and those waiting for certification are higher than the non-certified ones.
 - *Certified/waiting smallholders have a consensus on the positive effects of RSPO certification on the environment.*



Economic Impacts of RSPO Certification in Keresas & Sapi

Annual Household Income

Annual Household Income (RM)			
Keresas		Sapi	
Certified	Non Certified	Certified & Waiting	Non Certified
23,922	20,484	27,011	26,123
$H_0: \bar{x}_C - \bar{x}_{NC}$			
$t(66) = 0.88, p = 0.382$		$t(82) = 0.25, p = 0.804$	



Economic Impacts of RSPO Certification in Keresas

Changes in Annual Income among Certified/Waiting Smallholders in Keresas & Sapi upon joining RSPO

Changes in Annual Income	Keresas		Sapi
	Certified	Certified	Waiting
Increased	81%	76%	63%
Unchanged	13%	14%	35%
Decreased	7%	10%	3%



Majority of the certified smallholders/waiting for certification enjoy increment in their household income upon joining RSPO.

Economic Impacts of RSPO Certification in Keresas & Sapi

Annual Yield (tonne/ha)

Age of Tree	Annual Yield (tons/ha)			
	Keresas		Sapi	
	Certified	Non Certified	Certified & Waiting	Non Certified
3 – 6 years old	15.13	8.17	10.56	13.19
	$t(24) = 2.848, p = 0.009$		$t(8) = -0.67, p = 0.261$	
7 – 20 years old	11.61	8.42	13.41	12.11
	$t(31) = 1.58, p = 0.062$		$t(30) = 0.68, p = 0.250$	
Above 20 years old	-	4.16	14.79	16.74
	-		$t(21) = -0.78, p = 0.222$	

OLS Regression

Dependent variable : Annual Yield

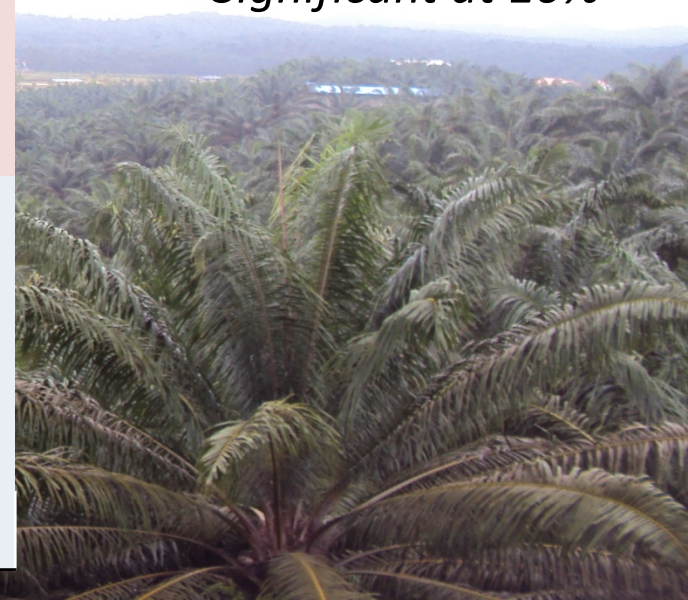
Explanatory Variable	Coefficient	Std. Error
RSPO	2.74	1.08*
Age of Trees	0.19	0.05*
Land/Labor Ratio	-0.69	0.43**
Fertilizer	2.85E-03	1.69E-03**
Fertilizer ²	-3.29E-07	3.49E-07
Herbicide	0.03	0.09
Herbicide ²	-2.33E-04	4.22E-04
Age of HH Head	-0.04	0.04
Constant	10.23	2.74

$n = 119$

$R\text{-squared} = 0.219$

** Significant at 1%*

*** Significant at 10%*



CONCLUSIONS & RECOMMENDATIONS

SOCIAL IMPACTS

- ☐ Certified smallholders/waiting for certification in Keresas and Sapi believe that RSPO certification generally improves social wellbeing.



CONCLUSIONS & RECOMMENDATIONS

ENVIRONMENTAL IMPACTS

- ☐ Certified smallholders/waiting for certification from Keresia and Sapi perceived that RSPO certification is beneficial to the environment.



CONCLUSIONS & RECOMMENDATIONS

ECONOMIC IMPACTS

- ❑ Majority of the certified smallholders/waiting for the certification in Keresia and Sapi enjoy increment in their household income upon joining RSPO.
- ❑ Annual yield for RSPO members is higher.

CONCLUSIONS & RECOMMENDATIONS

- ❑ Three **recommendations** to improve the effectiveness of RSPO certification on smallholder's livelihood.
- ❑ Continuous education and agronomic support should be provided to the smallholders.
 - *Constantly improve their productivity and help achieve maximum benefits of the certification.*
 - *There is an incentive for certified mills to provide these services in exchange for continuous quality supply of FFBs.*

CONCLUSIONS & RECOMMENDATIONS

- ❑ Premium pricing of FFBs and transparency in pricing and payment mechanism can attract more smallholders to get certified.
 - *Smallholders are responsive to economic incentives*
 - *Certified mills could transfer some of the premium they get from selling certified sustainable palm oil (CSPO) to the certified smallholders.*
 - *Certified mills have to be transparent towards grading, pricing and payment for FFBs.*

CONCLUSIONS & RECOMMENDATIONS

- ❑ **Group managers need to play an active role in organizing certified smallholders.**
 - *Not only for certification purposes, but also as a farm business decision-making entity.*
 - *RSPO certification provides a platform for the smallholders to be organized as a unit to enable collective bargaining in terms of input purchase, request for extension services, transportation, and FFB sales.*

ACKNOWLEDGMENT

We would like to extend our gratitude to the following parties

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Roundtable on Sustainable Palm Oil



ACKNOWLEDGMENT

We would like to extend our gratitude to the following parties

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THANK YOU FOR YOUR ATTENTION

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