



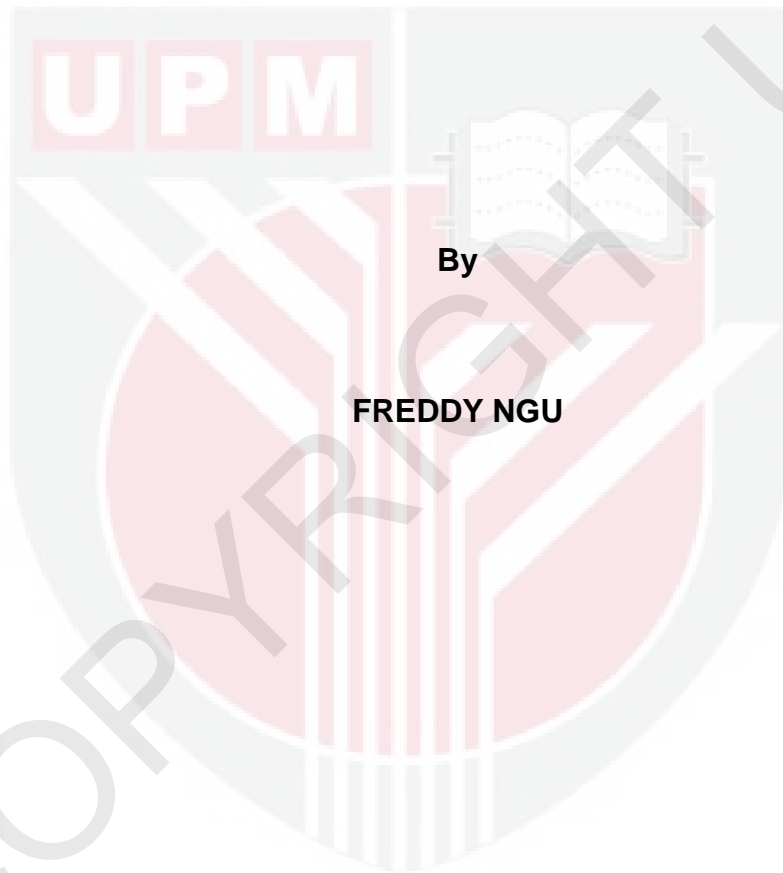
UNIVERSITI PUTRA MALAYSIA

***ATTITUDE AND KNOWLEDGE ON OIL PALM FARM
BIODIVERSITY AND WILLINGNESS TO PARTICIPATE IN
SUSTAINABLE PALM OIL CERTIFICATION AMONG OIL PALM
SMALLHOLDER IN KUALA SELANGOR, SELANGOR***

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**ATTITUDE AND KNOWLEDGE ON OIL PALM FARM BIODIVERSITY
AND WILLINGNESS TO PARTICIPATE IN SUSTAINABLE PALM OIL
CERTIFICATION AMONG OIL PALM SMALLHOLDER IN KUALA
SELANGOR, SELANGOR**



By

FREDDY NGU

**A Project Report Submitted in Partial Fulfillments of the Requirement
for the Degree of Bachelor of Forestry Science in the Faculty of
Forestry Universiti Putra Malaysia**

2016

DEDICATION

I dedicated that this study to my both parents, my friends and those who gives me support me from the beginning until finishing writing. This work especially dedicated to my supervisor that always taught, gives me advice and willing to spend time for me during my research and also to my examiner. Thank you to all of you.



ABSTRACT

There has been tremendous area expansion for palm oil cultivation throughout the world due to global demand of palm oil-based products especially in Malaysia. The smallholder plays an important role to the global palm oil supply chain. It is expected that global demand for certified sustainable palm oil will increase and participation of independent smallholders in the certified sustainable palm oil supply chain is important. However, participation in sustainable palm oil certification is still lacking especially among Malaysian independent oil palm smallholder. This study was therefore designed to assess smallholders' attitude and knowledge on farmland biodiversity and to examine smallholders' willingness to participate in palm oil certification scheme. Semi structured interview was used to obtain relevant information from independent smallholders at Kuala Selangor, Selangor. Data collected were analysed using qualitative and quantitative analyses. The study found that smallholders' knowledge on oil palm farm biodiversity were narrowed toward pest animal such wild boar and monkey. Almost half of the smallholders have negative feeling toward wild animals on their farm. Nonetheless, smallholders showed considered willingness to join the sustainable palm oil certification with expectation of lower costs of joining the schemes. This study can be used by policy maker or oil palm standard schemes as a reference to develop extension program and promote certification scheme.

ABSTRAK

Terdapat pengembangan kawasan yang besar untuk penanaman kelapa sawit di seluruh dunia disebabkan oleh permintaan global produk berasaskan minyak sawit terutamanya di Malaysia. Pekebun kecil memainkan peranan yang penting untuk rantai bekalan minyak sawit secara global. Dijangka bahawa permintaan global terhadap minyak sawit yang mendapat pensijilan mampan akan meningkat dan penyertaan pekebun kecil adalah sangat penting. Walau bagaimanapun, penyertaan di dalam pensijilan kelapa sawit masih lagi kurang terutamanya dari kalangan pekebun kecil di Malaysia. Oleh itu, kajian ini telah direka untuk mengkaji sikap dan pengetahuan pekebun kecil mengenai biodiversiti di dalam ladang kelapa sawit mereka dan juga menentukan kesanggupan pekebun kecil untuk menyertai skim pensijilan minyak sawit. Kaedah temu bual separa berstruktur telah digunakan untuk mendapatkan maklumat yang berkaitan daripada pekebun kecil persendirian di Kuala Selangor, Selangor. Data yang diperolehi dianalisis dengan analisis kualitatif dan kuantitatif. Kajian ini menunjukkan bahawa pengetahuan pekebun kecil kelapa sawit terhadap biodiversiti adalah minima dan tertumpu kepada haiwan perosak seperti babi hutan dan kera. Hampir separuh pekebun menunjukkan sikap negatif terhadap haiwan di dalam ladang kelapa sawit mereka. Pekebun kecil menunjukkan kesanggupan untuk menyertai pensijilan kelapa sawit secara mampan dengan jangkaan kos yang lebih rendah. Kajian ini boleh digunakan oleh pembuat dasar atau mana-mana skim pensijilan kelapa sawit sebagai rujukan untuk merangka program pengembangan dan seterusnya mempromosikan pensijilan kelapa sawit mampan.

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APPROVAL SHEET

I certified that this research project report entitled “Attitude And Knowledge On Oil Palm Farm Biodiversity And Willingness To Participate In Sustainable Palm Oil Certification Among Oil Palm Smallholder In Kuala Selangor, Selangor” has been examined and approved as a partial fulfilment of the requirement for the degree of Bachelor of Forestry Science in the Faculty of Forestry, Universiti Putra Malaysia.

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TABLE OF CONTENTS

	Page
DEDICATION	ii
ABSTRACT	iii
ABSTRAK	iv
ACKNOWLEDGEMENTS	v
APPROVAL SHEET	vi
LIST OF TABLES	ix
LIST OF FIGURES	x
LIST OF ABBREVIATIONS	xi
CHAPTER	
1	INTRODUCTION
1.1	Background 1
1.2	Problem Statement 3
1.3	Objectives 5
2	LITERATURE REVIEW
2.1	The History of the Malaysian Palm Oil Industry 6
2.2	Types of Smallholders and Other Local Stakeholders 10
2.3	Biodiversity and Environment Issues Related to Oil Palm 11
2.4	Environmental Sustainable System 13
2.5	Palm Oil Sustainable Certification 14
2.5.1	Roundtable on Sustainable Palm Oil (RSPO) 15
2.5.2	Indonesian Sustainable Palm Oil (ISPO) 17
2.5.3	Malaysian Sustainable Palm Oil (MSPO) 18
2.6	Benefits of Sustainable Palm Oil Certification 22
2.7	Challenges Related to Certification Participation 24
2.8	Previous Study on Farmer's Participation in Agri-Environment or Sustainability Schemes 25
3	METHODOLOGY
3.1	Research Design 28
3.2	Sampling Method 28
3.3	Study Site 29
3.4	Questionnaire Development 30
3.5	Survey Implementation 33
3.6	Data Analysis 34
4	RESULTS AND DISCUSSION
4.1	Introduction 36
4.2	Respondents' Background 36
4.2.1	Demographic Background 36
4.2.2	Oil Palm Farm Background 37
4.3	Knowledge and Attitude toward Oil Palm Farm Biodiversity 39
4.3.1	Knowledge on Oil Palm Farm Biodiversity 40

	4.3.2	Attitude on Oil Palm Farm Biodiversity	42
4.4		Smallholders' Attitude and Willingness to Participate in Sustainable Palm Oil Certification	44
	4.4.1	Familiarity on Sustainable Palm Oil Certification Scheme	44
	4.4.2	Benefits Expected From Certification as Suggested by Farmers	45
	4.4.3	Attitude towards Requirement Needed to Certify Oil Palm Farm	46
	4.4.4	Willingness to Participate In Sustainable Palm Oil Certification Scheme Given Palm Oil Price Premium of Oil Palm	48
	4.4.5	Willingness to Participate In Sustainable Palm Oil Certification Scheme Given Annual Payment of Certification Fee	50
	4.4.6	Willingness to Pay for the Cost of Palm Oil Certification	50
	4.4.7	Willingness to Receive Advice on Sustainable Palm Oil Certification	52
5		CONCLUSION AND RECOMMENDATION	
	5.1	Conclusion	54
	5.2	Limitation of the Study	55
	5.3	Recommendation	55
		REFERENCES	56
		APPENDICES	62
		Appendix A: Questionnaire	62
		Appendix B: Interview at Kuala Selangor	67
		Appendix C: Farmer's oil palm farm	69

LIST OF TABLES

TABLE		PAGE
2.1	Oil palm planted area by state as at December 2015 (Hectares)	7
4.1	Characteristic of respondent's	37
4.2	Palm oil farm background	38
4.3	Smallholders' view and knowledge on oil palm biodiversity	41
4.4	Farmers attitude toward biodiversity in oil palm farm	43
4.5	Farmers' attitude toward the requirement needed to participate in sustainable palm oil certification	48
4.6	Annual fee that farmers willing to pay for cost of palm oil certification	50

LIST OF FIGURES

FIGURE		PAGE
2.1	Distribution of oil palm planted area by category as at December 2015	8
2.2	Trend of Malaysia palm oil exports from 1964 to 2015	9
3.1	Map of Kuala Selangor	30
4.1	Other crops planted for sale	39
4.2	Other crops planted for own consumption	39
4.3	List of wild animal usually seen in farmer oil palm plantation	40
4.4	Farmers familiarity on Sustainable Palm Oil certification	45
4.5	The benefits farmer expect to receive from joining certification scheme	46

LIST OF ABBREVIATIONS

CPKO	Crude Palm Kernel Oil
CPO	Crude Palm Oil
CSPO	Certified Sustainable Palm Oil
EIA	Environmental Impact Assessment
FAO	Food and Agriculture Organization
FFBs	Fresh Fruit Bunches
FELCRA	Federal Land Consolidation and Rehabilitation Authority
FELDA	Federal Land Development Authority
FSC	Forest Stewardship Council
GAP	Good Agricultural Practices
GHG	Greenhouse Gas
HCV	High Conservations Value
IPM	Integrated Pest Management
ISCC	International Sustainability and Carbon Certification
ISO	International Organization for Standardization
ISPO	Indonesia Sustainable Palm Oil
MPOB	Malaysian Palm Oil Board
MPOC	Malaysian Palm Oil Council
MSPO	Malaysian Sustainable Palm Oil
NGOs	Non Governments Organization
PIPOC	MPOB International Palm Oil Congress and Exhibition
PORIM	Palm Oil Research Institute of Malaysia
RISDA	Rubber Industries Smallholders Development Authority
RSPO	Roundtable on Sustainable Palm Oil
RSSF	RSPO Smallholders Support Fund
SCC	Supply Chain Certification
SEIAs	Social/Environmental Impact Assessments
UPM	Universiti Putra Malaysia
USDA	United State Department of Agriculture
WAGS	Wild Asia Group Scheme

WCED	World Commission on Environment and Development
WTP	Willingness to Pay
WWF	World Wildlife Fund



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CHAPTER 1

INTRODUCTION

1.1 Background

Oil palm was planted commercially in Peninsular Malaysia where it replaced rubber plantation and forest in 1917. Oil palm industries had boosted up Malaysian economy where revenue of oils and fats was estimated around RM63.6 billion in 2014 (MPOC, 2014). This makes the oil palm industry as an important commodity among other commodities sector in Malaysia. According to Malaysian Palm Oil Board (MPOB) (2015), about 5.39 million ha of areas are under oil palm in 2014 and about 800, 000 ha is accounted by independent smallholders. Roughly, this industry employed about 600,000 people that engaged directly in this sector. These shows that smallholders are not minor player in oil palm industry.

According to Roundtable on Sustainable Palm Oil (RSPO) (2012), smallholders are more tightly as family-based enterprises producing palm oil from less than 50 ha of land. In practice, farmers under smallholder category are having the rights and perhaps also laborers on nearby plantations, all of which affect the choices they make as smallholders. Palm oil production has more than doubled in the last decade, now dominating the global market for vegetable oil (FAO, 2011a).

The production of palm oil has long been associated with reports of tropical deforestation, biodiversity loss, water pollution, and violation of customary

land rights (Anon, 2004;; Koh & Wilcove, 2008; Anon, 2009: Then, 2009). Most palm oil is produced from large industrial plantations driving tropical deforestation. Approximately 85 percent of palm oil is grown in Malaysia, much of it at the expense of forests (Fitzherbert et al., 2008). The destruction is devastating for local animals and plants, as well as local peoples who rely on these ecosystems for food and their livelihoods.

Oil palms are one of the world's most rapidly increasing crops causes to tropical deforestation, hence the biodiversity value. Oil palm plantations support much fewer species than do forests and often also fewer than other tree crops include nematodes, mites, several orders of insects, rodents, porcupines, pigs, elephants and monkeys, weaver birds which remove the leaves, and vultures which eat the fruits (Hartley, 1967). With rising demand for vegetable oils and biofuels, and strong overlap between areas suitable for oil palm and those of most importance for biodiversity, substantial biodiversity losses will only be averted if future oil palm expansion is managed to avoid deforestation. Others see oil palm as a commodity playing an important role in mitigating climate change, providing alternative sources of energy, and contributing to economic development and rural livelihoods (Obidzinsk et al., 2012).

Various groups of stakeholders lead by the Non Governments Organization (NGOs) make efforts to encourage sustainable oil palm farming which has lesser impact on the environment. This efforts lead to the establishment of palm oil certification. The Roundtable on Sustainable Palm Oil (RSPO) was

established in 2004 with the objective of promoting the growth and use of sustainable oil palm products through credible global standards and engagement of stakeholders. RSPO is an association under Swiss Law composed of various organizations from different sectors of the palm oil industry for the purpose of developing and implementing global standards for sustainable palm oil. Globally, the aims of these efforts are to assure that production of sustainable agriculture yield in the main form of CPO (crude palm oil) and CPKO (crude palm kernel oil) for oils and fats markets.

In recent years, Malaysian governments have taken alternative way to promote sustainable oil palm agriculture. A Malaysian Sustainable Palm Oil (MSPO) standard has been established by the Malaysian Government via the Malaysian Palm Oil Board (MPOB). MSPO is already geared nationwide acceptance. Indonesia is also developed own standard which is Indonesia Sustainable Palm Oil (ISPO). This organization was expected to set the mandatory for all oil palm plantation companies in Indonesia. Hence, palm oil industry will produce the blueprint for other agricultural industries in promoting environmental friendly and farming practices.

1.2 Problem Statement

According Council Regulation (2005), European Union agricultural policy introduces agri-environment support scheme for farmers as a mean to protect biodiversity. Under agri-environment support schemes, farmers and other bodies responsible for land management are paid to manage their

environment. This policy practices and many other biodiversity support schemes, however, fail to either engage farmers (Kleijn & Sutherland, 2003). Farmers' knowledge and attitudes towards the environment have been shown to be affected by the way they manage their farms and by joining the environmental support schemes (Gasson & Potter, 1988; Morris & Potter, 1995; Willock et al., 1999; Beedell & Rehman, 1999; 2000; Wilson & Hart, 2000; Schmitzberger et al., 2005). There is little study of farmers' knowledge and attitudes towards biodiversity on farmland that related to nature-friendly management (Burgess & Harrison, 2000; Jacobson et al., 2003; Jurt, 2003; Soini & Aakkula, 2006), especially among oil palm smallholders in Malaysia.

In response to sustainability of oil palm cultivation issues, sustainable palm oil certifications were launched. There are the Roundtable on Sustainable Palm Oil (RSPO) in 2004, The Indonesian Sustainable Palm Oil (ISPO) in 2009, and The Malaysian Sustainable Palm Oil (MSPO) in 2013. Palm oil smallholders are a vital part of the global palm oil supply chain, accounting about 9% of total global palm oil production (WAGS, 2015). In Malaysia, smallholders make about 38% of total oil palm production and 15% came from independent smallholders (MPOB, 2015). It is expected that global demand for Certified Sustainable Palm Oil (CSPO) will increase and participation of independent smallholders in the CSPO supply chain is important.

Nevertheless, participation from smallholders for both RSPO and MSPO certification are still lacking (MSPO, 2015). In Malaysia, information on the

smallholder's perception, knowledge and willingness toward the sustainability schemes is still limited.

1.3 Objectives

The objectives of this study are:

- i. To determine smallholders' attitude and knowledge toward biodiversity in oil palm farm.
- ii. To determine smallholders' attitude and willingness to participate in sustainable palm oil certification scheme.

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